THE SCHOOL REVIEW
A JOURNAL OF SECONDARY EDUCATION

VOLUME XXIV OCTOBER 1916 NUMBER 8

MAKING THE HIGH SCHOOL DEMOCRATIC

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Mr. Taft, in a speech[1] in New Jersey last June, voiced a fear that the high schools may yet dominate the universities. Many worse things than that might happen. When one considers the very long subservience of this part of our educational service to ideas fostered in select and antiquated foundations, proudly remote from public responsibility and control, the injection of an independent, or even of a dominating, influence into the relation is hardly disconcerting to anyone other than those dependent upon the universities for life and sustenance. If control is to be settled by majorities, the high schools have some claim, both in the number of institutions and in the multitudes they serve. If control is to be settled by excellence of service, there will be found those who believe it can be established that in methods of discipline and teaching the high schools are today less subject to the drag of repudiated tradition than those institutions which claim a higher rank. That so eminent an observer should find a danger in the course the influence of our high schools is taking signifies the extent of the change they are undergoing.

In modern times education has so often, in speech and pamphlet, been linked with democracy that it is easy to forget how very

[1] William H. Taft, address at the fiftieth anniversary of the founding of Peddie Institute, Hightstown, New Jersey, June 7, 1916.

recent such association is. The nations of antiquity perfected their special kind of education to a point not surpassed, perhaps, by present efforts. But it was a training of the elect. The rank and file of mankind were as remote from it as the toilers of China are from the taste of meat. Books were chained to altars. Fortunate possessors of leisure were intrusted with the power to read them. "Scholar" was a word to be associated with the rare and exclusive title of a gentleman. Along came Gutenberg and made the book so cheap that the crofter's cottage can possess a library. French encyclopedists spread the astounding doctrine of the rights of the common man. Equality, freedom, humanity, entered into thinking, discussion, and belief. They blossomed into fruitage on this western soil; a nation sprang into existence with these ideas as watchwords. From the lips of Franklin, Washington, and Jefferson came a succession of positive and practical formulations of the new thought, establishing the fact that free and universal education is a fundamental principle of democratic government. This is revolution, so pronounced as to declare that the star and garter shall be worn by every farmer and that every humble digger and ditcher shall be known as "sir."

One cannot say that the possessors of education have been completely and enthusiastically successful in the realization of this ideal. Within the sound of my voice are those who can recall when education was considered by the schoolmaster as a privilege to be withdrawn from the lazy or the disrespectful; when suspension and expulsion were common weapons to enforce whatever the managers of schools were pleased to require. The higher one works up in the system, or the deeper one delves into college and university theory, the greater persistence of old education's exclusive prerogative he finds, whether it be distinctive dress, secret coteries, or selective methods of excluding applicants from the privilege of an education.

Perhaps because they are nearer to the universities and have been dominated by them, perhaps because in numbers they are fewer than the elementary schools and humanly desire to preserve that distinction—at any rate, from whatever cause, honorable or discreditable, the high schools of America have not, until the last

very few years, enthusiastically endeavored to extend universal free education. It is to them that we, on this side of the ocean, have owed up to recent times the perpetuation of ideas which our American Revolution sought to overturn. One of these was the maintenance of the idea of caste. Ten years ago the high-school man declared his function to be the training of leaders. Thus have all aristocracies justified their existence. Now the high-school man asks, "Who selected me to train leaders? No one. Who is to train the rank and file? Let me, the high-school man." Ten years ago the high school maintained a netting at its door through which only the finer grade of humanity might sift. The hope and prayer of the school man now is that he may be able to serve all the youth of his neighborhood, bright, dull, college-seekers, coming mechanics, lawyers, laborers, all the children of all the people, old enough for high school, whether fit or not. The revolution is here, delayed a hundred and forty years after the epochal date of seventy-six's great July. But here it comes, a rolling tide, surging eastward from Los Angeles and Boise, southward from Newton and Iron Mountain. For years we heard the mission of the high school formulated to maintain a high standard of scholarship for those who could achieve it. But only recently I heard from a high-school man: "Our mission is not scholarship but service, not books but boys, not culture but citizens, and, in America, always was, though we who should have known it best were ignorant of it. No city collects its taxes and supports us for the care of anything but its children. We are no skimmers of the community's cream but the caretakers of the youth. We are not perpetuators of a classic culture and no one hires us so to be, but we are in the business of helping boys to grow to men, girls to women, all able and disposed to advance the general good."

In New York City within ten years high-school enrolment has jumped from 30,000 to 80,000. Shall this increase be discouraged lest money be wasted upon children diagnosed in advance as mentally unequipped to shine in scholarship and leadership, or shall such increase be encouraged and provided for on the ground that every child is entitled to keep traveling on toward the power to use his own resources and the world's resources? New York

City has decided this question for high-school democracy and against high-school aristocracy. This city counts as a public asset the desire of the young to enter the high school even if the child is unable to finish the course.

Consider the regular activities for pupils and for the whole community within this very building [Washington Irving High School] —loan exhibits from the zoölogical gardens and the museum of art, public entertainments, neighborhood gatherings for discussion of public questions, courses in library work, designing, home-making, including care of babies, domestic science in its many forms—all of them ranking with Latin or German or physics, all of them in the only aristocracy that the high school recognizes—the aristocracy of desire to grow, the aristocracy of effort and of service.

In other high schools boys and girls are giving half-time to education in shops and stores and half-time to continuation of that education in high schools. Something is happening which is making it progressively difficult to tell from conversing with young men and young women whether they have graduated from college or whether they are only high-school graduates already endowed with the vision and determination that formerly characterized college products only.

This awakening of the high school to a larger duty is an inspiring event of our day. To change from the conception of conservers of culture to the ideal of a common public service is to broaden the view in the direction in which the Fathers looked when they predicated a newer, finer race on this virginal soil. The high school—suckled by a mother all of whose antecedents claimed nobility, exclusiveness, and selection—has grown up. Like another Lafayette, it has thrown away its mummeries and baubles to ally itself with the new humanity. This means an end to a dishonesty which would accept bounty from many while serving a few. It means an end to the isolation which widened the unnatural breach between the education of a boy of thirteen and the education of the same boy at fourteen. It means a truer fraternity among teachers, as our secondary instructors discover that they are part of the public-school system.

Inspired by such desires as these, the high school's domination of the university is a situation not to be feared but greatly to be desired. Who touches more closely the homes of the nation—the high school or the college? Who is more truly cognizant of the needs of the city or town—the public-school teacher or the college professor? Your faces have been turned too long toward the peaceful elm-lined campus, the abode of a chosen few. Direct your minds and hearts to the back streets and the factories of your own town. Go out like consecrated missionaries and minister to the ignorant and uninformed who are called to meet the problems of an adult with the meager training of a child.

If in you, the awakening defenders of a basic principle of American belief, there remains a trace of the old, selfish, snobbish high-school desire to draw the highest public-school pay and to perform the cleanest, easiest, highest-toned office, expel it, exorcise it, put it away. The world has little need of you. But if, with eyes opened and hearts expanded, you see that high school is nothing and young men and women are everything; that fitness *for* high school is artificial and fitness *of* high school is imperative; that high standards of scholarship which drive children out are criminal and high standards of the number of children secured and educated for their work in the world are glorious—then we want you with all the fervor of the hart panting for the cooling streams. Speed your changing views. Continue to find service greater than subjects, boys than books, girls than grammar, and take the place a hundred years ago intended for you—that of pastors of the people, preparers of patriotism, *parentes publici puerorum puellarumque*.

NOTES ON THE UNCOMPLETED WORK OF A COMMITTEE ON FRESHMAN INSTRUCTION

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Two years ago a committee was appointed by the president of the University of Washington to investigate the instruction in the Freshman year. After a number of meetings in which the experience of the members of the committee was drawn upon, the following larger questions were formulated as a basis for the inquiry:

I. How are we conducting our courses from the point of view of the needs of the Freshman as he comes to us from the high school?

II. How are we conducting our Freshman courses as required courses in the university? Why are courses required? Why is a particular course required? In other words, what are the criteria of a required course?

III. How are we conducting our courses from the point of view of the needs of other departments? What should our course do in view of the demands of other departments on a required course?

IV. How are we conducting our courses from the point of view of the advanced work of our own department? How should the prescribed elementary course be related to the advanced course?

The Freshman instructors of the departments of civil engineering, mathematics, physics, chemistry, geology, and history separately met with the committee and the foregoing questions were discussed and answered by the instructors. Written reports were secured from a number of other departments. The full work of the committee unfortunately was never completed; an outline of the work as far as conducted is the object of the following paper:

UNIVERSITY FRESHMAN INSTRUCTION

Is there a problem of Freshman instruction? If so, what is it? What are its subdivisions? There seems to be a growing suspicion that our educational machine ought to yield a higher percentage of efficiency and that the difficulty does not lie entirely with the product, raw as it is, turned over to us by the high schools. The questions raised by many visible signs of deficiency cannot be answered

solely by requiring higher scholarly standards of instructors and students, unless, indeed, there is included something more than mere academic scholarship, necessary as this qualification is. We seem to be vaguely conscious of the existence of Freshman problems of instruction, but that consciousness has not aroused us much yet.

I. *How are we conducting our courses from the point of view of the needs of the Freshman as he comes to us from the high school?*

We find that there is a very high percentage of poor work and consequently "flunking" in the Freshman year; here the goats are separated from the sheep, and, of course, there should be a separation, but the accuracy of our separation may be questioned. We pay little attention to the actual or supposed preparation that the Freshman brings to us. We assume that he must be prepared for us without also assuming that we should be prepared for him.

We receive all students alike from the high school, whether they have had any preliminary preparation in our branch or not, and herd them together in one class. There are some exceptions to this statement. On inquiry it was found that the students who had the preliminary training in the high schools do no better work than those who had none. Indeed, in one college they were said to do much poorer work. And yet, on the other hand, in a few departments where recognition is given to the high-school preparation the students are able to take up the advanced courses and pursue them successfully. Wherein lies the inconsistency? Is the high-school work in any branch worse than nothing as preparation for that branch in the university? If so, has it any preparatory value for other college branches? Perhaps those students with previous high-school preparation who are allowed to take second-year work in the same line in the university would not be able to do the Freshman work as well. Such considerations as these lead us to ask the question, "What becomes of the university's list of prescribed preparatory subjects?"

Still other questions arise: What becomes of our principle of prerequisites in the university? Do we give the students some good stiff, productive courses in the Freshman year, only to teach them in the upper years that we were fooling? As a matter of fact, students know by actual experience that many of the upper-class

courses with a string of prerequisites before them can be successfully pursued in the Freshman year much more easily than the Freshman courses. Then, too, there has been a tendency on the part of the faculty to consider the system of prerequisites lightly, judging by the exceptions to the rule allowed. What is our theory of prerequisites?

The first course in mechanical drawing of the engineering college illustrates something of the sources from which the foregoing questions were derived. Instructors giving the first course in mechanical drawing testified that students offering high-school mechanical drawing did poorer work than those who had none. Through questions directed by the committee, the following information was secured concerning the mechanical-drawing course of the engineering college: first, that all engineering students, with or without high-school mechanical drawing, took the course together; second, that while any student would be permitted to do the work of the course as rapidly as he desired, yet no incentives were offered him to work in advance of his class; third, that students offering high-school drawing were not told that any more would be expected from them than from those who were pursuing the subject for the first time; fourth, that the courses in drawing in the high schools and in the engineering college alike were conducted by the dictation and imitation method, as distinguished from the problem method of instruction; fifth, that the systems of lettering, use of instruments, etc., in the high schools and college differed considerably; sixth, that the students offering high-school drawing did better work in the first semester than the others did, but began to drop behind about the middle of the second semester.

On the basis of these statements secured from the drawing instructors, there seem to be two possible explanations. First, if more were required of the student offering high-school drawing than from the others, he would do more. The fact that he does better work than the others the first semester and begins to do poorer work by the middle of the second semester seems to show that in the early stages of the work he regards it as easy and, through lack of attention and of motive for doing superior work, he wakes up finally, too late, only to find that he has lost much of the

work accomplished by those who were compelled to work hard from the beginning. Secondly, a system of imitation drawing does not offer good preparation for another system of imitation drawing in the college; and if the problem method were used both in the high school and college the difficulty might be solved. If students are required to think their courses through, mere differences of lettering and mechanical procedure would offer no great obstacle to progress.

A similar lack of articulation with high-school instruction was found in a number of other departments. Such examples served to emphasize the necessity for a thorough study of the relation of university Freshman work to high-school instruction. It is quite possible that a system of segregation of students into different classes, based upon various kinds and degrees of high-school preparation, would improve Freshman instruction. Many high schools, to improve their instruction, have a system of following up the work of their students in the university. Would it not be well, also, for the university to have a "follow-back" system to the high schools, to improve Freshman instruction?

Regarding the question of the relation of Freshman courses to the high-school work, we believe that the university departments should be urged to make an investigation of high-school work in their lines, with the object of linking up the work in the two schools. The suggested method is the calling together of the instructors in the two schools from time to time in each line of work for mutual consideration of questions, the university men to take the initiative.

Other visible signs of deficiences present themselves. The prevalence of poor work on the part of students is shown only in part by the large "flunking" list. There is a lack of initiative on the part of students who are ordinarily good absorbers. They lack, also, a knowledge of the essential features of the branches pursued. They lack purpose for doing work. They lack in organizing ability. There is a tendency here, as elsewhere, to "crib." What do these matters mean when considered in relation to our instruction? Are we warranted in dismissing these details as entirely the results of poor high-school training, and "natural, inborn laziness," and if

we could be warranted in such a conclusion, still, does not such a condition present some important problems of instruction for us?

What are we doing to secure initiative? Are our students reading, or working toward the solution of problems, in part self-assigned, or wholly assigned by the instructor? For example, one department testified that on the average students performed not more than 75 per cent of the work assigned by instructors, and that none of the students in that department ever did more than the assignment. Are students reading or working toward the solution of any problems first discovered by themselves? Some instructors assign so many pages of collateral reading in certain books, on which they check up by reading the students' notes, or by giving them quizzes, oral or written. Is this the final and approved way? How long must the time be postponed when the student should be allowed and encouraged to read to his problems, to go about his work as the instructor does, or should do? Do our students, and especially our Freshmen, need any training in the use of materials? Does the tendency to carry away library books without leaving a record have any relation to methods used in assigning readings? Is there any relationship between the overemphasis of the final examination, as determining the students' final standing, and "cribbing"? Should a student be given an average grade of B or C for the entire semester, and then be "flunked" out on his final examination? Have the students the right to know from the beginning the instructor's system of judging them? Are these matters not largely problems of instruction?

Again, the fact that so many students of good, or even average, ability can pass off twenty-five hours of credit a semester should cause serious reflection. How is it possible for a student to be anything more than a mere receptacle for ill-digested information, when from five to eight different university branches are pursued at the same time? If we were really securing good work from our students, how could such a condition exist?

To what extent is our instruction planned to discover, and, having discovered, to reinforce and feed the enthusiasms and ambitions of our students? If this could be done, then we really could get some efficient work done. Can we reasonably expect our students

to be superior to us in this respect? We pursue our particular line because we have an enthusiasm for it, but very frequently we have little, if any, enthusiasm, for anything else in the university, and yet we expect our students to have a dozen enthusiasms to our one. The quality of our judgments upon matters outside of our own departments seems to show that we are not very strong on outside enthusiasms. Is the student like us in this respect? or does he belong to another order of nature? How much does our instruction assist in throwing the student into a real, thinking situation?

We found that a number of instructors felt that students should be held for good thinking, but that they should be kept in the dark as to the method of their own thinking. In other words, a student is not to check up on the validity of his own thinking, in terms of his own mental processes. How much can instruction help students in weighing relative values, and in developing a practical logic in his branch of study? Would it not help if the instruction could be so arranged that the student would ask himself the question, "What does this thing mean?" and not, "I wonder what he wants;" not, "Can I find an answer-book, a notebook, or a pony that will get me out of the hole?" If a student could in some way be assisted in forgetting his professor, and could face the problem squarely on his own account, the first great battle would be won.

What may we say of the various methods of instruction in vogue as factors in the organization and control of a subject by the student? (1) A course may be suggestive and interesting without being thorough, complete, or productive, or instrumental. (2) On the other hand, mere sequence of topics supplied largely by the instructor is not organization; merely following the logical development of a subject is not organization. (3) Merely the use of the question-and-answer method will not secure organization. The scope of the instructor's questions and the completeness of the student's answers are important in organization. The answers should be as full as the requirements of the question demand. (4) The lecture method will not secure organization unless students are made responsible in some way for applying the lecture. We, as instructors, are too fond of seeing or hearing our pet ideas come back to us in sealed packages containing the original, unadulterated

stuff. Has the student really reacted upon the lecture, or has he "canned" it for return delivery? Or has he merely slipped off and is able to come back, now and then, with a driblet of the original? (5) The drill method will not secure organization, although for purposes of holding matter temporarily until it can be used it may help organization. (6) The organization of a subject requires that its parts, as well as the whole, be used as instruments in thinking again. Its content must pass definitely into channels of power—power to do certain things, think certain things, appreciate certain things; and this passing of content into power cannot be postponed to take place in the indefinite future. (7) Shall the instructor assume the entire responsibility for leadership in the recitations? Shall he always be in the pilot-house? (8) How much of the responsibility for the success of the work shall the student take? (9) What other problems of instruction are evident?

II. *How are we conducting our Freshman courses as required courses in the university? Why are courses required? Why is a particular course required? In other words, what are the criteria of a required course?*

The contest between free election and prescription in the high-school and college courses has now been going on for over half a century, and the results in contemporary curricula are remainders and reminders of an age of competition in ideals and standards. Opinions of faculty members vary widely, some holding that there should be no prescriptions whatever, except in preparation for a definite vocation or profession, others, that a course composed very largely of prescribed work should be offered. Our own curricula are very largely compromises, but we are not sure that the principle of the compromises is evident.

As to the criteria for prescribed courses in the college of arts, or of science, the testimony indicates that many members of the faculty have never adequately considered the subject, being content with a traditional view; that others are not interested in the matter; and that still others are rather narrowly academic in their views. Those who have expressed their views suggest three types of criteria for prescribed courses: (1) The prescribed course is an academic

tool; i.e., aims merely to set forth a method of study or research. (2) The prescribed course has great disciplinary value; its performance means increased efficiency in any work. (3) The subject-matter of the prescribed course is essential for social service and personal well-being.

1. *The prescribed course as an academic tool.*—In the preliminary discussion of the committee, it transpired that nearly all departments represented on the committee were aiming, in their Freshman work, to secure method in organizing subject-matter, not information.

2. *The prescribed course as a means of discipline.*—There is a great deal of discussion at present as to whether this old attitude has not been outgrown. But, putting this mooted question aside, we can say that unless a given subject has some peculiar, distinctive, disciplinary value it, as against some other course, has no valid place in a prescribed curriculum in the colleges of arts or science. For example, a language instructor in the university says of his subject, "It has an important disciplinary value, that is to say, it has this value if the teacher does not allow any slovenly work to pass, if he insists patiently upon accuracy at all times, if he makes appeal continually to the student's reasoning powers. Language-work, rightly conducted, helps to develop power of observation, reasoning, and the memory." On the other hand, a professor of mathematics holds that his subject trains a student, first, in "habits of application, concentration, and faithful performance of assignments," second, in "habits of neatness, precision and industry," third, in "habits of clear and exact reasoning from premise to conclusion." It seems clear to us that mathematics and language come close together in the disciplinary field. Should a student, therefore, be required to elect work in both fields for discipline?

3. *The subject-matter of a prescribed course is essential for social service and personal well-being.*—Herbert Spencer's scheme in his essay on *Education*, as a basis for prescription, represents this point of view. In modified form, it might be stated as follows:

We need to know: (1) the kind of world we live in; (2) our functions in the world; (3) how to enjoy ourselves in our world and in the performance of our functions.

Spencer's criticism of English education in 1857 was that it concerned itself largely with the third of these topics. His contention was that the first two were more important than the third, and that the third could genuinely be secured only upon the foundation of the first two.

Science, natural and social, history, literature, philosophy, and the arts all have a valid claim to prescription on account of their subject-matter. Language, except in rare instances, has not. Language is valuable as a tool subject, but far less than is generally assumed. The majority of our students will use it neither as a means of acquainting themselves with the scientific advances of foreign nations nor as a means of unlocking the literary treasures thereof.

III. *How are we conducting our courses from the point of view of the needs of other departments? What should our course do in view of the demands of other departments on a required course?*

From the discussions of the points involved in this question, as submitted by the committee to the various departments, the following inferences have been drawn: (1) The departments in general are aware that their required Freshman courses ought to satisfy the needs of other departments. (2) With certain exceptions there seem to be no very definite ideas as to what these needs are. (3) In most cases where such ideas have been definitely formulated there has been little or no co-operation between the related departments. (4) There is a manifest willingness for co-operation along this line among the various departments.

In view of these conditions, it is recommended: (1) that the members of each department make a careful study of the required work in their own, and other departments, with a view to discovering such interrelations as are not already fully appreciated; (2) that wherever the required work in one department is found to be of direct use to another department, these departments should appoint a joint standing committee from among their members to consider a proper adjustment of the work in question.

IV. *How are we conducting our courses from the point of view of the advanced work of our own department? How should the prescribed elementary course be related to the advanced course?*

In this connection, several Freshman instructors were uncertain whether their work was meeting the needs of the advanced courses in their own departments or not. The question had not occurred to them. In some cases, however, there were found to be co-operation and planning effectively to relate the elementary prescribed course to the advanced courses of the same department.

This paper has served its purpose, first, if it has made clear the point that there are problems of Freshman instruction; secondly, if it has indicated what some of the problems are, and thirdly, if it has suggested some possible solutions.

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HIGH-SCHOOL EFFICIENCY—HOW RATED?[1]

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The attempt to rate or measure the efficiency of a high school is not rendered easy by the presence of previous example or by the availability of scales or standards definitely adapted to the purpose. Although the high school has had a long and honored career as a distinct unit in our system of public education and is, and has been, frequently defined in terms of aims, units, and courses, it has failed signally to impress its individuality in terms which submit readily to quantitative measurement. The typical public-school surveys of the past decade have ordinarily exhibited the high school statistically merely as four additional elementary grades or, at best, have devoted relatively inconspicuous amounts of time and space to secondary education. Moreover, the tests and scales of educational achievement which seem fairly on the way to practical utility, such as those in arithmetic or handwriting, are almost exclusively aimed at elementary education and for the greater part neglect secondary education.

Notwithstanding these apparent difficulties, no other part of our educational system has undergone so much inspection and standardization as has the high school. Historically, the high school became subject to external scrutiny and foreign visitation the moment it undertook the work of preparing its students for college. As an agency for strengthening the high school in its preparatory function, college supervision of high-school standards has been of the greatest importance. Indeed, in so far as college preparation correlates with it, the same may be said of general efficiency. On the other hand, it seems evident that the attempt of the high school to measure up to the standards set by the college has blinded it to its more individual aims and to the necessity for

[1] Presented at the University of Oregon Educational Conference, June, 1916.

establishing norms and ideals in its own field of educational endeavor.

Let us turn our attention for the moment to the methods of the several agencies which up to the present have attempted to rate high-school efficiency. As already intimated, the college has been a powerful agency in this field. Its work has been strengthened in recent years by the organization of such co-operative bodies as the North Central Association of Colleges and Secondary Schools. The items of efficiency in this connection have been stipulated primarily to secure college preparatory efficiency, although, particularly in recent years, points of general efficiency have been mentioned more specifically. Such points have been stated ordinarily in terms of minimum requirement, such as: 15 units for graduation, college graduation for teachers, 6 recitation periods per day per teacher, a minimum of 3 teachers, so many pupils per teacher, adequate laboratory facilities, etc. The existence of such minimum essentials has been determined by the proper filling in and filing of statistical blanks by the school in question and by rapid personal inspection of the high school by an official visitor. In opposition to this, or in connection with it, many colleges and universities have maintained the familiar entrance-examination system. A few have rested their final judgment upon the student's progress after entering college.

The various state departments of education have constituted a second agency for rating the efficiency of high schools. This agency has aimed primarily at the general growth of secondary education and has been largely instrumental in the rapid spread of the high-school movement in many states. For the most part, state departments have been concerned only with minimum requirements. These have been set high enough to stimulate, but low enough not to discourage, incipient or developing high schools. The items of efficiency have pertained to a limited number of easily ascertainable points, such as: number and preparation of teachers, the courses of study followed, sanitary equipment, and laboratory apparatus. The method of inspection has been similar to that used by the university or college inspector, save that the state inspector has had the advantage of legal authority.

Finally, there has been the educational expert or commission of experts. A somewhat more comprehensive study of efficiency has usually been attempted by this agency and the number of points considered has been materially larger. Besides points previously mentioned, such items as the holding power of the high school and the relation of the school to community needs have been frequently mentioned.

All of the foregoing agencies have attempted in an indirect way to set up standards of high-school efficiency, but, so far as I am aware, no attempt has been made to elaborate a scale of points for a thoroughgoing measurement of the high school as an educational institution in itself. The inadequacy and incompleteness of the foregoing methods of rating high-school efficiency lie in the fact that neither of the first two agencies mentioned attempt to measure more than minimum efficiency, while the other has never devoted itself specifically to the full scope of the problem. There is manifestly a serious need for a scale or an outline which will enumerate the essential points of high-school efficiency and provide a method by which it may be more adequately rated. The following "Analytical Outline of High-School Efficiency" is the result of an attempt to meet this need.

ANALYTICAL OUTLINE OF HIGH-SCHOOL EFFICIENCY

I. Grounds
   1. Location
   2. School-garden and agricultural facilities
   3. Play and recreational facilities

II. Building and General Equipment
   1. General adequacy—size, entrance, and internal plan
   2. Janitorial service
   3. Health equipment—light, heat, ventilation, toilet, etc.
   4. Furniture, statuary, and decorations
   5. General rooms—auditorium, study, library, etc.
   6. Special rooms—office, laboratory, locker, etc.

III. Special Equipment
   1. Library and study-room
   2. Laboratory
   3. Industrial and vocational
   4. Fine arts
   5. Classroom—tables, devices, supplies, etc.
   6. Gymnasium and playground

IV. General Educational Program
   1. Types of education—preparatory, physical, cultural, vocational, and socializing
   2. Relation to community needs
   3. Wider use activities
   4. Records, reports, and publicity
   5. Economical organization—comparative costs

V. Special Educational Program
   1. Organization of courses—flexibility, adaptability, sequence, and correlation
   2. Extra classroom activities
   3. Medical inspection and supervision
   4. Supervision of instruction
   5. Measurement of instruction
   6. Requisites for graduation

VI. Efficiency of Teachers
   1. General adequacy—number and co-operation
   2. Time allotment and size of classes
   3. Individual efficiency (see Boyce score card):
      a) Personal equipment
      b) Social and professional equipment
      c) School management
      d) Technique of teaching

VII. Progress of Pupils
   1. Drawing power of school
   2. Holding power of school
   3. Guidance into proper courses
   4. Effective classification
   5. Rate of promotion

In the time which remains, I shall discuss briefly the sources, the construction, and the possible uses of the foregoing outline. In order that the outline might include all of the characteristics which are representative of efficiency in typical American high schools, I have made a careful analysis of the literature[1] which bears upon this question. This includes four types of source material. The first type is the literature which describes the high-school standards set up by state departments of education, educational foundations, and various committees and associations. It is concerned chiefly with minimum requirements of a nature already indicated.

The second source material embraces the literature of secondary education, which pertains to the aims, methods, and organization

[1] See accompanying Bibliography.

of high schools, such as the recent books by Sachs, Stout, Johnston, Monroe, Judd, and Parker, and the large number of shorter treatments similar in nature to Eliot's "Changes Needed in American Secondary Education," and Martin's "Peculiar Obligation of the Public High School."[1] The almost overwhelmingly large amount of current literature of this type is in itself of great significance to the importance of this problem.

A third source includes the reports of educational surveys which bear upon the high-school question. Of this type are the Portland, Springfield, and San Antonio city surveys, the Ohio and Vermont state surveys, and the general surveys of high-school education in Kansas and Colorado.

A final source exists in the descriptions of the various educational tests, scales, and score cards which have been elaborated to measure educational efficiency. Particularly valuable among these are Boyce's *Method for Measuring Teaching Efficiency* and Strayer's "Score Card for School Buildings and Equipment."

Having assembled the many points of high-school efficiency revealed by a study of the foregoing source materials, I still had before me the more difficult problem of classifying and organizing them into a satisfactory analytical outline. Such an outline should definitely satisfy four requirements: (1) it should include all essential points; (2) it should be sufficiently brief to rest easily within the mental grasp of the ordinarily well-informed administrator; (3) it should be sufficiently detailed to afford an analysis of efficiency; (4) its separate specific items should not duplicate or encroach upon each other. As a result of painstaking study and experimentation, I submit the present outline as a solution of the foregoing problem.

Time does not at present permit a detailed discussion of the individual points of the outline. This I hope to offer in printed form at a later date. A mere summary must suffice for the present. In selecting the terminology of the several items, I have endeavored to follow the best educational practice. The 37 individual items cover all possible points of high-school efficiency. They have been

[1] For references, see Bibliography.

classified for purposes of more ready analysis into 7 groups with separate major headings, namely:

I. Grounds
II. Building and General Equipment
III. Special Equipment
IV. General Educational Program
V. Special Educational Program
VI. Efficiency of Teachers
VII. Progress of Pupils

The three topics under I, Grounds, i.e., (1) Location, (2) School-garden and agricultural facilities, and (3) Play and recreational facilities, need no comment here.

The items under II, Building and General Equipment, are equally significant, but some may wonder what bearing the latter part of point (4) Statuary and decorations, may have upon high-school efficiency. To my mind this is a distinctly important factor. Aesthetic surroundings have long been recognized as a prime agency in forming good taste and a discriminating appreciation of the beautiful. Probably the most potent influence of static beauty upon high-school pupils is exerted by the decorations which ornament the walls and interiors of the rooms in which they spend so large a share of their waking time. The aesthetic appeal of beautiful art products cannot fail to exert a powerful refining influence upon the pupils. The detailed items which may be considered under the major groups I, II, and III, of the present outline of high-school efficiency are well indicated in Strayer's "Score Card for City School Buildings,"[1] of which the following is a brief form:

SCORE CARD FOR SCHOOL BUILDINGS AND EQUIPMENT

I. Site
  A. Location. 1. Accessibility. 2. Environment.
  B. Drainage. 1. Elevation. 2. Nature of Soil.
  C. Size and Form.
II. Building
  A. Location. 1. Orientation. 2. Position on Site.

[1] For an elaborate discussion of this score card, see G. D. Strayer, "Score Card for City School Buildings," *Fifteenth Yearbook of the National Society for the Study of Education*, Part I, chap. iii (The University of Chicago Press, 1916).

B. External Structure. 1. Type. 2. Material. 3. Height. 4. Roof. 5. Entrances. 6. Aesthetic Balance. 7. Condition.
C. Internal Structure. 1. Stairways. 2. Corridors. 3. Basement. 4. Attic.

III. Service Systems
A. Heating and Ventilation System. 1. Kind. 2. Installation. 3. Air Supply. 4. Distribution.
B. Fire Protection System. 1. Apparatus. 2. Fireproofness. 3. Escapes. 4. Electric Wiring. 5. Fire Doors.
C. Cleaning System.
D. Artificial Lighting System.
E. Electric Service Systems. 1. Clock. 2. Bell. 3. Telephone.
F. Water Supply System.
G. Toilet System. 1. Distribution. 2. Fixtures. 3. Adequacy. 4. Seclusion. 5. Sanitation.
H. Mechanical Service Systems. 1. Elevators. 2. Book-lifts. 3. Waste-chutes.

IV. Classrooms
A. Location and Connections.
B. Construction and Finish. 1. Size. 2. Shape. 3. Floors. 4. Walls. 5. Doors. 6. Closets. 7. Blackboards. 8. Color scheme.
C. Illumination. 1. Glass Area. 2. Windows. 3. Shades.
D. Cloakrooms and Wardrobes.
E. Equipment. 1. Seats and Desks. 2. Teacher's Desk. 3. Bulletin Boards.

V. Special Rooms
A. Large Rooms for General Use. 1. Playroom. 2. Auditorium. 3. Study-hall. 4. Library. 5. Gymnasium. 6. Lunchroom.
B. Rooms for School Officials. 1. Offices. 2. Teachers' Room. 3. Nurses' Room. 4. Janitor's Room.
C. Other Special-service Rooms. 1. Laboratories. 2. Lecture Rooms. 3. Storerooms. 4. Studios.

The foregoing items stand out in concrete relief at the first consideration, but not so with the points which constitute group IV of the high-school outline, i.e., General Educational Program. A little reflection, however, makes it perfectly clear that points (1) Types of education offered, (2) Relation to the needs of the community, and (3) Wider use of the high-school activities are important factors of high-school efficiency. Some question may arise as to the validity of items (4) Records, reports, and publicity and (5) Economical organization. It must, of course, be kept in

mind that none of the factors in themselves *insure* efficiency. It is quite possible that, so far as the individual pupils are concerned, a high school might prove efficient without records, reports, publicity, or economical financial organization. But from the point of view of service due to an interested and tax-paying public, such a high school would be anything but efficient.

Items covered by *a*), *b*), *c*), and *d*) under point 3, Individual efficiency, of VI, Efficiency of Teachers, are taken from Boyce's *Methods for Measuring Teaching Efficiency*.[1] The Boyce Efficiency Record follows:

EFFICIENCY RECORD

I. Personal Equipment
   1. General appearance
   2. Health
   3. Voice
   4. Intellectual capacity
   5. Initiative and self-reliance
   6. Adaptability
   7. Accuracy
   8. Industry
   9. Enthusiasm and optimism
   10. Integrity and sincerity
   11. Self-control
   12. Promptness
   13. Tact
   14. Sense of justice

II. Social and Professional Equipment
   15. Academic preparation
   16. Professional preparation
   17. Grasp of subject-matter
   18. Understanding of children
   19. Interest in the life of the school
   20. Interest in the life of the community
   21. Ability to meet and interest patrons
   22. Interest in lives of pupils
   23. Co-operation and loyalty
   24. Professional interest and growth
   25. Daily preparation
   26. Use of English

[1] *Fourteenth Yearbook of the National Society for the Study of Education*, Part II (The University of Chicago Press, 1915).

III. School Management
- 27. Care of light, heat, and ventilation
- 28. Neatness of room
- 29. Care of routine
- 30. Discipline (governing skill)

IV. Technique of Teaching
- 31. Definiteness and clearness of aim
- 32. Skill in habit formation
- 33. Skill in stimulating thought
- 34. Skill in teaching how to study
- 35. Skill in questioning
- 36. Choice of subject-matter
- 37. Organization of subject-matter
- 38. Skill and care in assignment
- 39. Skill in motivating work
- 40. Attention to individual needs

V. Results
- 41. Attention and response of the class
- 42. Growth of pupils in subject-matter
- 43. General development of pupils
- 44. Stimulation of community
- 45. Moral influence

The points under group V, Results, in the Boyce outline are omitted from group VI, Efficiency of Teachers, in the present analytical outline, since they have been embodied elsewhere, notably under VII, Progress of Pupils. To some, progress of pupils may seem the all-important factor of the outline. An examination of the scope of the subordinate points, however, indicates its limitations. (1) The drawing power of the school, (2) the holding power of the school, (3) guidance into proper courses, (4) effective classification, and (5) rate of promotion, are important points and are all too often neglected, but they represent only one phase of the development of pupils. The remaining phases of educational growth are equally important and are more specifically connected with other items of the outline.

Finally, let us consider what uses may be made of an analytical outline. It is self-evident that the value of any scale of measurement, outside of its intrinsic merit, depends upon the knowledge and skill of the user. The use of an outline presupposes knowledge

of its elements and an acquaintance with the type of material to be measured. A score card is of little value to the city-bred man in buying pigs or cattle. But with this reservation, I am convinced that the value of an outline of this type is far-reaching.

In the first place, an analytical outline should prove of value in stimulating and organizing the thinking of all who are concerned with secondary education. To the layman, it should serve to exhibit more ideally something of the real scope of secondary education; to the teacher, it should serve to orient the place of individual instruction in the broader field of high-school education; and to the administrator, it should serve, first as an agency for detecting the weak points of the individual high school and, secondly, as a program of procedure for extending the activities and services of public secondary education.

In the second place, an analytical outline of high-school efficiency should prove of value to state departments, colleges, experts, and to all others who are attempting to measure or standardize the high school. It offers a comprehensive system of points which calls attention to all items of efficiency, and which may be subjected to such weighting as suits the needs of the specific inquiry. Each point may be marked according to the knowledge and skill of the person using the scale. The crudest system of marking would be merely to indicate the presence or absence of the respective points of efficiency. Better than this would be the plan of marking each item good, average, or poor, according to its individual merit. Practically any school man could go this far with the outline. In more expert hands, the outline may be used for more definite rating. Each point may be rated on a basis of 10 points, or scaled from "very poor" to "excellent," as Boyce suggests in the measurement of teaching efficiency.

The possibility of making a positively accurate score card out of the outline by assigning specific numerical values to each of the points is questionable. But that a desirable and useful scale may be thus formed is unquestionable. Such a score card may be composed by obtaining and averaging the individual judgments of a number of competent educational thinkers. The user would then have not only a comprehensive outline of efficiency to follow, but

some indication, as well, of current opinion as to the comparative values of the respective points. Such a score card is now in process of completion and, it is hoped, may be presented at an early date.

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THE TEACHING OF COMMERCIAL GEOGRAPHY

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We need some studies in high school which shall in some measure give the student a bird's-eye view of our industrial life. As it is now, in most cases the student finishes his high-school work with very little idea of the industrial life into which he is to go. The same argument that is urged for manual training may be applied to commercial geography. The industries have left the occupations of the home to be taken up in the factories. The boy and girl no longer have any opportunity to see these processes, yet, in order really to understand modern life they should have some knowledge of the great industries on which modern life depends.

It is the purpose of this paper to discuss a line of development which we have followed in the De Kalb Township High School in the past four years in working over the subject of commercial geography. Commercial geography, as taught in the past, while apparently giving the student a knowledge of industrial life, has not in reality done so. I think those who are familiar with it will agree that it has been largely a mass of statistics, grouped around cities and countries, with very little material that could be called interpretative of modern life. Yet the writer believes that commercial geography, rightly interpreted, could be made one of the most valuable studies in the curriculum and one that would be an aid to every student, whether preparing for college or for business.

The point of view of the old geography has been industry in relation to countries and not industry in relation to man. This is a fundamental difference, and changes the subject from one of statistics to a discussion of human needs and the way industry has developed to supply them. Secondly, commercial geography must discuss industrial processes as a unit; that is, by taking the

raw product and tracing its development until it becomes a finished product ready for the consumer. Lastly, commercial geography should discuss the conditions of labor in the various occupations, the opportunities for employment in them, and the pay that labor receives. This work will relate the study to the demand for vocational help and guidance.

We may criticize the present commercial geography in that it takes almost no account of man's social and intellectual needs. These surely demand some treatment in the study of modern life.

Let us consider briefly the needs of a man as shown in commerce. Commerce is determined by human needs and in high school should be discussed from this point of view. This we have tried to do in organizing the work in De Kalb. Commercial geography, when organized from a geographical point of view, loses its human interest and becomes mere facts and figures. The discussion of needs, however, makes it live and makes it worth while. The fundamental human needs are for what are called the subsistence wants; that is, for food, clothing, and shelter. Under the first head we should consider: first, cereals for their value as food, which measures man's need for them; then where they are grown and their preparation and the milling of them until they finally reach the consumer in the form of food. In the same way, meats would be considered in relation to their value as food; then in respect to stock raising, slaughtering, preparation for food, etc. In a similar manner would be taken up the important vegetable foods; then beverages, tea, coffee, and cocoa, and finally, what is very important in our day and yet has received almost no consideration in modern textbooks, the question of canned foods, their value as compared with fresh foods, their proper canning, possibility of decay and infection, etc.

It should be said that under all the preceding subdivisions the geographical side is considered. This, of course, is mentioned when the origin of the raw material is taken up. Similarly, the place of production of intermediate and finished products is considered; but this geographical side is only incidental to the more fundamental question of the supply of human needs and the adaptability of natural products through the work of man to meet his needs. In

like manner, as the last subdivision under each topic, as for instance, cereals or meats or stone quarrying, the condition of labor is studied, the number of men employed is taken up, and the pay of labor in its various grades is mentioned. The opportunities for advancement are also considered. This brings in the human element in relation to the individual pupil and makes him familiar with the great industrial processes on their human side. It also offers him some little basis for choosing intelligently an occupation.

In a similar manner we take up the subdivisions under shelter, taking up the woods, stone, cement, brick, tile, glass, and metals, which are used in building. These topics are treated as units, tracing the product from the raw material to the finished product. As a subdivision under shelter, we consider internal furnishing of the house, the problems of furniture, carpets, rugs, and like articles being considered.

We consider the need for trained social service as exemplified in law, medicine, engineering, teaching, and government service, etc. As will be seen from the foregoing brief outline, we have broken away largely from the geographical basis of commercial geography and have substituted man and his needs as the center of our study.

The justification for doing this will be the greater value of the work to our students. This is to be decided, not entirely from theoretical reasons, but from the results in the classroom and the value after the student leaves school. We can speak with some degree of certainty on the first of these heads. Under the latter head, we shall have to wait for the pupil himself to express himself. We find the interest in the classroom is much greater when we consider commerce from the foregoing point of view. There is real human interest in the topics taken up and the needs studied seem to have a greater vitality than under the old method. Under our old method of teaching commercial geography, after a few general principles at the introduction were considered and after the novelty of the statistics had worn off, both class and teacher felt the subsequent work under that head to have little practical value. Teachers will find that their classes are interested in reorganizing the material in the text on the basis of this plan.

We are fairly convinced that something akin to this point of view must ultimately be introduced into the curriculum of the high school, some study that gives the student a fairly concrete idea of the great industrial processes which go to make up the world of business, and, on the other hand, gives him a definite idea of the human element involved in the labor which produces the commodity which he uses constantly, but of whose origin he has very little conception. I append herewith in diagrammatic form an outline of our course.

OUTLINE FOR TEACHING COMMERCIAL GEOGRAPHY

I. Introduction

Commerce in relation to man. The need for exchange of commodities, etc. Commerce an answer to needs

1. Man's needs as creating commerce
   - *a*) The fundamental body needs—the demand for food, clothing, and shelter
   - *b*) The culture wants—for books, newspapers, schools, etc.
   - *c*) The commercial needs—for power and machinery, railroads and transportation, money and banking, etc.
2. Nature's control of commerce
   - *a*) Topography as controlling commerce—mountains, rivers, etc.
   - *b*) Climate as controlling commerce—rainfall, temperature, etc.
   - *c*) Modern cities:
     1. Geographic factors in their location
     2. As centers of trade
3. Means to commerce
   - *a*) Transportation—its importance in modern times: ocean—inland—river—canal—railroads—roads—automobile—freight rates, etc. —passenger
   - *b*) Modern means of exchange:
     1. Boards of trade
     2. Stockyards
     3. Department stores—mail-order houses
     4. Banks—money

II. Foods

- The fundamental needs—food
- 1. Cereals
  - *a*) Wheat—the bread supply for Europe and America.
  - *b*) Rye—the bread supply for some people
  - *c*) Corn—barley—oats

  } Extent of market; importance as food, etc.
- The farm—farm methods—farm opportunities
- 2. Vegetables
  - *a*) Potatoes
  - *b*) Peas
  - *c*) Beans

  } Range of market, food value, etc.
- 3. Animal Products
  - *a*) Beef
  - *b*) Pork
  - *c*) Mutton

  } Animal husbandry—extent of market—food value; Stockyard products—raising cattle—the ranges—the yards—retail— government inspection
  - *d*) Milk and butter: cleanliness—municipal inspection
- 4. Fish: sea foods—value, etc.
- 5. Sugar: cane—beet—molasses—food value
- 6. Condiments: spices, pepper, cinnamon, salt, etc.
- 7. Beverages
  - *a*) Tea
  - *b*) Coffee
  - *c*) Cocoa

  } Where raised—preparation—value in diet
  - *d*) Beer
  - *e*) Whiskey

  } Alcoholic—value in diet
- 8. Canned goods: canning processes—effect on modern home life

III. Industries

- The following points may be taken up regarding those industries of the community in which students might seek to earn a living:
- 1. Conditions of employment
  - Hours
  - Working conditions
  - Effect on worker, etc.
- 2. Number of persons employed
- 3. Opportunity in work for advancement
- 4. Pay of labor—social position
- 5. Preparation needed

IV. Clothing

- 1. Textiles
  - *a*) Wool—how obtained—from sheep's back to cloth—character of fiber—amount used—in what climates, etc.
    1. Spinning—processes—business industries, factories
    2. Weaving
    3. Dyeing—dye-stuffs
    4. Making into clothes
    5. Value as clothing
  - *b*) Cotton—how obtained—same as wool
  - *c*) Linen—how obtained—same as wool
  - *d*) Silk—how obtained—same as wool

  } I. Protection
- 2. Leather
  - *a*) Hides—from cattle to shoes
  - *b*) Shoes

  } I. Protection
- 3. Rubber: waterproofing—manufacture — I. Protection
- 4. Felt: hats — I. Protection
- 5.
  - *a*) Jewelry—gold and silver
  - *b*) Laces
  - *c*) Feathers

  } II. Adornment

V. Shelter

1. House Construction
   - *a*) Woods
     - 1. Hard
       - *a*) Oak — Forestry; Logs; Lumbering; Mill work
       - *b*) Maple — Forestry; Logs; Lumbering; Mill work
     - 2. Soft
       - *a*) Pine — Forestry; Logs; Lumbering; Mill work
     - 3. Value as building material and furniture
   - *b*) Metals:
     - 1. Iron — Mining; Smelting; Use in buildings
   - *c*) Stone—quarrying—polishing
     - 1. Granite
     - 2. Limestone—marble
     - 3. Sandstone

     (Value as building material)
   - *d*) Cements
     - 1. Importance as a building material
     - 2. Manufacture
   - *e*) Brick and tile — Composition; How made; Importance of clays
   - *f*) Glass—how made
2. House Furnishings
   - *a*) Furniture — Value of industry centers; Hard and soft woods
   - *b*) Carpets — Manufacture; Carpet wool; Fibers
   - *c*) Decorations — Paints; Oils; Colors
   - *d*) Paintings
3. Heating
   - *a*) Stoves
   - *b*) Furnaces—how worked—extent of trade
   - *c*) Hot water—how worked—extent of trade
   - *d*) Steam
4. Lighting
   - *a*) Oil—kerosene—when discovered
   - *b*) Gas—when discovered—how made
   - *c*) Electricity—advantages
   - *d*) Matches

VI. Mining

1. Material found in earth's crust
2. Importance in industry of iron, copper, aluminum, clay, coal, etc.
3. Mining dangers, etc. (see Power)

VII. Power Needs

1. Fuel
   - *a*) Coal — Mining; Pumps; Shafts; Lifts
2. Power
   - *a*) Steam — Steam engine; Steam turbine; Boilers
   - *b*) Electricity—advantages
   - *c*) Water power—importance
   - *d*) Machinery—lubricants
   - *e*) Gas engine—importance—gasoline
   - *f*) Flying machines
3. Tools and machinery metals—importance in modern life
4. Importance of steel in machinery

- **VIII. Social Needs**
  - 1. Communications
    - *a*) Telephone—importance—men employed
    - *b*) Newspaper—printing—reporting
    - *c*) Telegraph
      - 1. Wire
      - 2. Wireless
  - 2. Measurement of time—importance—watches and clocks
  - 3. Amusements
    - *a*) Theater—place in life
    - *b*) Arts of pleasure—baseball, etc.
    - *c*) Tobacco—value, etc.
  - 4. The automobile
  - 5. Hotels
  - 6. See the "Profession" for further social needs
- **IX. Mental and Aesthetic Needs**
  - 1. Books
    - *a*) Paper
      - Food pulp
      - Linen pulp
      - Importance in arts and science
    - *b*) Printing
      - The mechanics
      - The art
    - *c*) Binding
  - 2. Writing materials
    - *a*) Inks—source
    - *b*) Pencils—source
  - 3. Art
    - *a*) Pictures
    - *b*) Sculpture
    - *c*) Architecture, etc.
- **X. The Professions—service. Need for Trained Service in Society**
  - 1. Law—bench and bar work in the community
  - 2. Medicine
  - 3. Teaching
  - 4. Engineering
  - 5. Government service

  Importance of professions
  Numbers
  Opportunities
- **XI. Arts of War**
  - 1. Powder
  - 2. Dynamite
  - 3. Explosives
  - 4. Guns
  - 5. Cannon

XII. Competition of nation with nation

XIII. Free trade versus tariff

Some useful reference books for work along this line are: Yeats, four volumes, a mine of information, treats from this viewpoint; Symonds, *Animal Products;* Crookes, *The Wheat Problem;* Chesholm, *Commercial Geography;* magazine articles on business.

A BRIEF SURVEY OF THE EVENTS PERTAINING TO EDUCATION PREVIOUS TO THE ORGANIZATION OF MINNESOTA AS A TERRITORY

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In order to obtain a true perspective of the development of education in Minnesota, we must trace the early history of the mission schools conducted among the Indians and mixed races, and thus prepare the reader for the opening scene of the drama of the following events, namely, the influences that led to the early organization of public schools in the territory of Minnesota.

The first record of establishing a school in the then still unorganized territory of Minnesota was in 1830, when Frederick Ayer was induced by Mr. Warren, a fur-trader, to join his party at Mackinaw and set up a school at his trading-camp at La Point, near Duluth, Minnesota. It was the opinion among some of these fur-traders that mission schools and missionaries were of great benefit in the fur trade.[1] Mr. Ayer was a volunteer missionary, a representative of the "American Board." In 1832 he founded a school at Sandy Lake. Here he remained throughout the winter.[2] In the following spring he was relieved by Mr. E. F. Ely of St. Paul, Minnesota. The attendance in this school was almost wholly made up of Indian children.[3] Mr. Ayer, who had been relieved at Sandy Lake, now proceeded to a point near Leech Lake, about sixty-five miles northwest from Sandy Lake. Here he established a mission which, it is said, was the first one founded west of the Mississippi, in Minnesota.[4] During the winter of 1833 to 1834, Rev. W. F. Boutwell taught school at this station. The following year, 1834, the mission was reopened and continued till the year 1838[5].

[1] *Minnesota in Three Centuries*, II, 220.

[2] Minnesota Historical Society, *The Aborigines of Minnesota*, p. 638.

[3] *Ibid., Collections*, I (1872), 81.

[4] *Ibid., The Aborigines of Minnesota*, p. 638.

[5] *Ibid., Collections*, I (1872), 81.

One fact may be noted in connection with the mission just mentioned and all succeeding missions established in this region: first, the mission and the school appear not to have been conducted simultaneously at all times and appear to have been distinct and separate undertakings; secondly, the very fact that a mission or school, or both were discontinued at any one particular place, like the one at Leech Lake, was either due to the warlike attitude of the natives that would not warrant the missionaries in remaining any longer, or to the inability of the missionaries to obtain the interest or the co-operation of the Indians so as to make their work effective.

Miss Poage, the first woman educator mentioned in my readings, who is spoken of as being bold and eager to enter upon such trying circumstances of frontier life, came to this section of the country in 1835, and with the co-operation of Rev. Williamson commenced a school at Lac Qui Parle, which was perhaps along the region now known to us as Lac Qui Parle County. Here Rev. Williamson, in order to make the instruction in school more interesting and attractive to the aborigines commenced teaching in the Dakota language.[1]

In 1836 a mission and a school were opened at Lake Pokegama, in Pine County, and were continued until the year 1846. The school was discontinued the same year in which it was opened, but it was reopened in 1837. In the meantime the mission carried on its regular religious and industrial work.[2] Mr. Ayer, Mrs. Seymore, and Mr. Ely were in charge of this newly organized station. During this same year Mr. S. W. Pond opened a school at Lake Harriet, not far distant from Fort Snelling, which is now within the corporate limits of the city of Minneapolis.[3]

As these missions were more or less subsidized by the federal government, government agents would visit and select certain stations as pay stations. In accordance with this regulation, Sandy Lake was selected as one of the pay stations in 1838. Considerable dissatisfaction was felt regarding the results thus far obtained by the different missions operating in this territory.

[1] Minnesota Historical Society, *Collections*, I (1872), 81.

[2] *Ibid.*, *The Aborigines of Minnesota*, p. 638.

[3] *Ibid.*, *Collections*, I (1872), 81.

Two of the main reasons given for their shortcomings were, first, the non-appreciative attitude of the Indian mind, and secondly, the misguided effort to make a good man out of the Indian in a few days. Both of these reasons constituted an indictment of the missionaries for not having approached the problem of educating the Indian into a more useful being from a psychological point of view. The chief motive of these missions was to convert the Indians to the Christian faith. Catechism and regular devotion, things entirely foreign within the experience of these primitive peoples, were too often the chief aim of the instructors.[1] Domestic and industrial arts found only a secondary place in their curriculum. To make conditions still more complicated, Governor Lucas of Iowa, of which state the southern portion of Minnesota was then a part, reinforced and encouraged the plan of the missionaries by declaring that the Indians must first be Christianized by the introduction of the gospel among them, and then be civilized by such means as schools, agricultural occupations, etc.[2] That such procedure was false psychology is clearly demonstrated by the fact that the federal government, after sixty years of fruitless effort of the missions, withdrew its aid from all sectarian schools in Minnesota. Their fallacy was again revealed when manual-labor schools were established by both the denominational forces and the government, for these latter institutions exercised a lasting and permanent influence upon the natives. Some farming was taught by most missionaries, but it served merely the purpose of a dessert or a luxury, and was not sufficient to encourage these people to take on civilized methods and abandon their savage traits and motives.

A new type of school (a boarding school) was established at Kaposia in 1838 by Mr. Amos Jones. Later Mrs. Boardman assisted him in this new undertaking.[3] An official report bearing upon the work carried on by some of the pioneer missionaries, for the years of 1838 and 1839, reads as follows:

> These gentlemen, with Mr. Ayer, established a mission and a school at Pokegama, on the Snake River, a branch of the St. Croix, and met with great

[1] *Ibid.*, *The Aborigines of Minnesota*, p. 638.

[2] *Ibid.*, p. 638.

[3] *Ibid.*, *Collections*, I (1872), 81.

> success. They helped build the Indians comfortable log houses, and broke up land for them and furnished them with seeds and instructed them in agriculture. . . . . The agricultural and educational interests of these Indians have suffered much the past season from the continuance of the war between the Chippewa and Sioux. They have been in constant state of alarm while here, expecting an attack of the Sioux.[1]

This report, as well as undertakings by the missionaries named above, is a clear indication of the fact that the primitive mind must be subjugated by things familiar to its experience and within its environment. One must begin with the concrete and only gradually arrive at the abstract. The conduct of the aborigine in this respect is very similar to that of a child, especially when it comes to teaching him the mores of a people entirely foreign to him. Two things seem to separate him from the sphere of child life; namely, that his mind is already set in its ideas and is no longer plastic, and, secondly, that his experiences acquired are the generalized residue based largely on the "discipline of natural consequences." These traits would tend to cause him to neglect such theories as would interfere with his immediate needs and comfort. We can therefore feel assured that had the industrial arts been given a greater emphasis in the course of instruction and had the religious phase been casually emphasized only, the results would have been more far-reaching and effective. The work of those missionaries who employed the greater portion of their time in instructing the natives in things applicable to their immediate needs, i.e., the industrial arts, has been proved to have been the most effective. The fundamental reason is evident, namely, all religious elements are only a part of the integral whole of the life-process, in which the problems of obtaining food are equally vital.

In 1842 several mission schools were established at such places as Cass Lake, Red Lake, at the mouth of the St. Croix, and Little Winnipeg. The work among the Dakotas was carried on with the same enthusiasm as heretofore. In 1843, Miss Fanny Huggins joined the family of her brother at Lac Qui Parle, and lent generous assistance in the education of the Indians. Considerable difficulty was being experienced in this region, of a different nature from

[1] Minnesota Historical Society, *The Aborigines of Minnesota*, p. 638.

any heretofore reported. The difficulty was largely due to the conflicting views held by the two contending elements of the whites in this vicinity. The missionaries endeavored to do their utmost to educate the Indian in order to make him a more social, efficient, and civilized being, and thus to enable him to participate in all public affairs and to be on an equality with the white man in dealing with such problems as might arise. Another faction, desiring to take advantage of the humble condition and the ignorance of the aborigines, disapproved of the idea of educating the Indians and tried to persuade them not to attend school. They informed the Indians that the only reason that the missionaries kept the school was because of a desire to obtain their money.[1]

Dr. Thomas Williamson, of whom we have already heard in connection with the work of the Lac Qui Parle mission, a pioneer missionary to the Indians,[2] took great interest in the educational matters of the unorganized territory, not only among the so-called natives, but also among the whites, who appeared to be equally as obstinate and dense as the Indians in the advancement of the educational ideal. In his numerous visits made to the hamlet of St. Paul, he discovered that the white children there were without educational and religious advantages. As no immediate aid could be had or granted them from the forces already in the field, he wrote to Governor Slade of Vermont, then president of the National Popular Educational Society, asking him to send a good teacher.[3] In order to give the reader a more vivid picture of the interest of Mr. Williamson in the education of the white children, I quote herewith an abstract from his letter, which portrays a village on the frontier:

> . . . . the village contains a dozen or twenty families living near enough to send to school. Since I came to this neighborhood, I have had frequent occasions to visit the village, and have been so grieved to see so many children growing up entirely ignorant of God, and unable to read His Word, with no one to teach them. Unless your Society can send them a teacher, there seems to be little prospect of their having one for several years. A few days since, I went to the place for the purpose of making inquiries in reference to the prospect

[1] *Ibid.*, *Collections*, III (1870–80), 121.
[2] Kiehle, *Education in Minnesota*, p. 9.
[3] Minnesota Historical Society, *Collections*, IV (History of the city of St. Paul), p. 162.

of a school. I visited seven families, in which there were twenty-three children of proper age to attend school, and was told of five more in which there were thirteen more [children] that is supposed that might attend, making thirty-six in twelve families. I suppose more than half of the parents of these children are unable to read themselves, and care but little about having their children taught. Possibly the priest might deter some from attending, who might otherwise be able and willing.

I suppose a good female teacher can do more to promote the cause of education and true religion, than a man. The natural politeness of the French (who constitute more than half of the population), would cause them to be courteous and kind to a female, even though the priest should seek to cause opposition. I suppose she might have twelve or fifteen scholars to begin with and, if she should have good talent of winning the affections of children (and one who has not should not come), after a few months, she would have as many as she could attend to.

One woman, Mrs. Irvine, told me she has four children she wished to send to school, and that she would give board and room in her house to a good female teacher, for the tuition of her children.

A teacher for this place should love the Savior, and for His sake should be willing to forego, not only many privileges and elegances of New England towns, but some of the neatness also. She should be entirely free from prejudice on account of color, for among her scholars she might find not only English, French, Swiss, but Chippewas and Sioux, with some claiming kindred with African stock.

A teacher coming should bring books with her sufficient to begin school, as there is no bookstore within three hundred miles.

Governor Slade referred the letter to Dr. C. E. Stowe, husband of Harriet Beecher Stowe, who forwarded it to his sister-in-law, Miss Catherine Beecher, who was then in Albany, New York, conducting a teachers' training class. After some deliberation, she selected Miss Harriet Bishop, a native of Vermont, as the most able candidate to qualify for the position. Miss Bishop accepted the call and came to St. Paul in July, 1847. The first building which had been selected for school purposes was a log hut, 10×12 feet, covered with bark and chinked with mud. It had been previously used as a blacksmith shop and was located on the site now the corner of Third and St. Peter streets. Wooden pegs were driven into the logs, about the height of the average seat from the floor, whereon rough boards were placed to serve as seats. The teacher was the only person to be honored with a chair. A rough cross-legged table stood in the center of the room whereon articles for

the use of the school in general were placed. The attendance was not as promising at the outset as anticipated by Mr. Williamson, but it gradually grew as the interest in the work spread. At the outset the attendance ranged only from 4 to 9 pupils. It increased more rapidly later, and by fall a larger room was necessary to provide for all incoming pupils.[1]

Through the influence of Governor Slade more women were sent to join the ranks at the frontier to instruct the growing generations to become more efficient, painstaking, and God-fearing citizens. The hardships which these pioneers encountered were by no means few. The schoolhouses were far from being such palaces as we find them today. The teachers could not have been otherwise than true, sympathetic, energetic, human, loving individuals in order to be able to induce backwoodsmen to appreciate the ideals of social welfare. These latter had to be made conscious of the fact that education was essential to their immediate needs and existence. That this ideal and energetic effort of the workers in education immediately took root is evidenced by the fact that within two years following the opening of the first school for the settlers they appeared to recognize their opportunities and organized the territory, and in so doing formed the nucleus of a state system of education that is said to be one of the most promising of any of the state systems in the Union.

[1] Minnesota Historical Society, *Collections*, IV, 169–70.

THE DISTRIBUTION OF HIGH-SCHOOL GRADUATES IN KANSAS[1]

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THE PROBLEM

It is exceedingly important for anyone engaged in any kind of work from time to time to survey the results of that work. This is as important in education as in any other line of endeavor. In late years great changes in the general conception of education have come about; more particularly in respect to the high school and its finished product. There is little definite first-hand information about what the high-school graduate really does after leaving the high school. The first definite material taken from first-hand investigation seems to be the account by Shallies in the *School Review* for February, 1913, of an inquiry made by the author among seventy-five high schools in the state of New York. He was particularly interested in the high-school graduate who went on to a normal school. Later in the same year a study similar in form was made by Mitchell concerning the high-school graduates of the state of Iowa. This study, however, did not take up any very definite comparison of the normal-school group as suggested by Shallies; it confined its investigation mostly to the relative standing of the states of Iowa and New York as to the groups entering teaching, liberal-arts colleges, clerical work, and farming, with the relation of the high school to each.

The present investigation was made for the state of Kansas, with especial reference to all the important callings entered by a large number of high-school graduates, and gives from time to time a comparison of the standing of this state with Iowa and New York.

[1] For more complete treatment see the master's thesis by the author upon the same subject, University of Chicago Libraries, 1916.

In general, an attempt has been made to answer the following questions:

1. What are the chief activities entered upon by high-school graduates in Kansas after graduation?

2. What is the relative standing, as students, of the group entering each calling?

3. What seems to be the chief function of the high school in Kansas?

4. How do conditions in Kansas compare with those in other states?

5. What percentage of high-school graduates in Kansas enter the various callings?

THE METHOD OF INVESTIGATION

In March, 1915, a circular letter was sent to all the high schools in Kansas maintaining a four-year course, explaining just what information was desired and asking replies stating whether they would be willing to help. To those who were interested, blanks sufficient for each graduate for the year 1914 were sent. These blanks asked for a transcript of the grades of each pupil for the whole of the four-year course and a statement of what each graduate had been doing since graduation. Eventually, 47 high schools responded and the records of 735 graduates were secured.

The information thus secured was summarized as follows: The average for the four years for each pupil was found. A table was then made for each school, showing the number of graduates and the average grade of each. The grades from each school were divided into tertiles as nearly equal in number as possible. The forty-seven tables were then combined in a single table, and this was divided, so that the number of pupils in the highest, the middle, and the lower tertiles was indicated. The pupils were then divided into classes according to the calling they had entered, and a classification was made showing how many of a given calling were to be found in the upper tertile, how many in the middle, and how many in the lower. Thus it was found that there were 212 graduates who entered the teaching profession. Had these been average students,

we should have expected to find about 70 in each of the three tertiles. But we actually find that there are but 51 in the lowest tertile, 78 in the middle, and 83 in the highest. This, therefore, seems to indicate that since there are fewer in the lower and more in the upper tertile than we should expect from an average, the scholarship of the graduates who entered teaching is above the average. The same method was followed for all the callings listed. Comparisons were then made with the other states, Iowa and New York, and final conclusions were drawn.

The distribution of the graduates according to the calling entered after completing the high-school course may be seen in Table I.

TABLE I

Calling	Number Entering	Percentage of the Whole
Teaching	212	29
Liberal-arts colleges	142	19
Remained at home	85	11
Clerical work	64	8
Calling unknown	44	6
Normal schools	37	5
Engineering schools	28	4
Other professional schools	26	3
Farmers	23	3
Business college	23	3
Business	18	3
Postgraduate in high school	15	2
Scattering	18	3
Total	735	99

Table II indicates the ranking of the graduates who entered the various callings. "Expected" indicates the number of graduates who would be in each tertile if the divisions were equal. "Actual" shows the number really found in each division. "Per cent" indicates the number of students found in each tertile for every hundred found in all three tertiles.

Table III compares the findings in New York, Iowa, and Kansas. The percentages in each tertile of the principal divisions are given. The figures for New York are taken from Shallies, those for Iowa from Mitchell. A * indicates no data.

TABLE II

	Teaching			College			At Home			Clerks			Normal School		
	Expected	Actual	Per Cent	Expected	Actual	Per Cent	Expected	Actual	Per Cent	Expected	Actual	Per Cent	Expected	Actual	Per Cent
Upper tertile	71	83	39	47	54	38	28	25	29	21	18	28	12	14	38
Middle tertile	71	78	37	47	36	25	28	33	39	21	22	34	12	10	27
Lower tertile	71	51	24	47	52	37	28	27	32	21	24	38	12	13	35
	Agricultural College			Farming			Engineers			Business			Trades		
Upper tertile	2	2	33	8	4	17	9	6	21	6	3	17	2	1	17
Middle tertile	2	2	33	8	10	43	9	13	46	6	9	50	2	4	67
Lower tertile	2	2	33	8	9	39	9	9	32	6	6	33	2	1	17
	Professional Schools			Postgraduate High School			Business Colleges			Music Schools			Unknown		
Upper tertile	9	8	31	5	8	53	8	5	22	2	3	50	15	8	18
Middle tertile	9	9	35	5	5	33	8	10	43	2	1	17	15	20	46
Lower tertile	9	9	35	5	2	13	8	8	35	2	2	33	15	16	36

TABLE III

	Teaching			College			At Home			Clerks			Normal School		
	N.Y.	Ia.	Kan.	N.Y.	Ia.	Kan.	N.Y.	Ia.	Kan.	N.Y.	Ia.	Kan.	N.Y.	Ia.	Kan.
Upper tertile	39	44	39	41	47	38	46	28	29	*	21	28	30	*	38
Middle tertile	25	35	37	33	30	25	37	36	39	*	39	34	30	*	27
Lower tertile	36	21	24	26	23	37	17	36	32	*	40	38	40	*	35
	Professional School			Business			Trades			Farming			Musicians		
Upper tertile	8	24	31	27	16	17	16	*	17	*	10	17	*	37	50
Middle tertile	40	26	35	33	56	50	34	*	67	*	45	43	*	39	17
Lower tertile	52	50	35	40	28	33	50	*	17	*	45	39	*	24	33

GENERAL CONCLUSIONS

1. Of the graduates of Kansas high schools, 29 per cent enter at once upon the work of teaching. No other calling comes within

10 per cent of this. The pupils who enter this profession are generally the better class of pupils.

2. Another 19 per cent of the graduates enter liberal-arts colleges at once. These students are but slightly above the average in scholarship.

3. Of the total, 11 per cent remain at home. They are generally below the average in scholarship.

4. The clerical professions are entered by 8 per cent. They are of a lower class still than those who remain at home.

5. It was impossible to get information with regard to the plans of 6 per cent of the graduates. It is noteworthy that only 18 per cent of these are found in the upper tertile.

6. The normal schools receive 5 per cent. These are about average students.

7. Engineering schools come next with 4 per cent. As a whole, they are somewhat deficient in scholarship.

8. Professional schools follow with 3 per cent. They are about average students.

9. Farmers are represented by 3 per cent. They are the poorer class of students.

10. Business colleges take 3 per cent. These also are of the poorer class of students.

11. Business claims 3 per cent. Only 17 per cent are found in the highest tertile, and 50 per cent are found in the middle tertile.

12. Only 2 per cent return to the high school for a postgraduate course. These are distinctly of the better class of students, more than half of them being in the highest tertile.

13. Less than 1 per cent go to agricultural colleges. They seem to be about average students.

14. Less than 3 per cent enter trades. These come from the middle class.

15. About 1 per cent of the better class of students enter music schools.

THE CHIEF FUNCTIONS OF THE HIGH SCHOOL IN KANSAS

In Kansas, at least, it is evident that two of the main functions of the high school are to prepare the graduate to teach and to fit

him to enter the liberal-arts colleges. It is highly probable that in preparing the student to teach the school is in many cases preparing him to enter college at a later date. The importance of these two functions may be seen when one recalls that the two together comprise 48 per cent of all the graduates of the high schools.

In the West, or Middle West, the idea has crept in that the high school should be "the poor man's college," with much greater stress laid upon providing for the general community needs than for fitting students for college alone. States including Iowa and Kansas have passed laws giving special encouragement and financial aid to high schools which comply with certain conditions relative to equipment, the qualification of teachers, and the giving of courses designed to train teachers for the rural school. Courses in home economics have been encouraged in the same manner, and as a result we find that the high schools in these states, at least, have about four important immediate aims in their teaching where the high schools of yesterday had but one—the fitting of the student for college. These four aims, in the order of their importance, judged by the number of graduates entering the various callings, are: (1) to fit the student to teach, (2) to prepare him to enter college, (3) to fit him for home life, and (4) to fit him for clerical work.

It may be seen that in Kansas, at least, the high school neither fits directly for agricultural work nor for entrance to agricultural colleges. The agricultural college, the normal school, the business college, trades, music schools, and business in general do not draw upon the supply of high-school graduates for their recruits. Each may and probably does draw upon the undergraduate in the high school, but in a much larger way it draws upon the rural-school graduate and the home itself.

NEW YORK, IOWA, AND KANSAS COMPARED

Iowa and Kansas agree that those students who enter teaching are among the best in the high school. Those in New York who enter teaching are distinctly inferior.

Both Iowa and New York seem to excel Kansas in the quality of the students who enter college.

Iowa and Kansas agree that those who remain at home belong in the middle or lower class. New York, on the other hand, finds that 46 per cent of those who remain at home are among the best students.

Iowa and Kansas agree that those who enter clerical work are from the poorer class of students.

New York finds that the pupils who enter normal schools are below average. Kansas finds hers about average.

THE PRINCIPAL'S DUTY IN IMPROVING INSTRUCTION[1]

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I

The principal's duty in improving instruction begins with himself. He must first honestly recognize his responsibility to the teaching done in his school. The principal's job is not simply to keep things going and to refer to the superintendent and to the individual teacher all responsibility for the quality and methods of high-school instruction. The superintendent hires the teacher; it is his business to get a good one, and whether she proves good or poor it is his duty to see her through!

Unfortunately, in this country there is no standardized and clean-cut division of responsibility between superintendent and principal in the conduct of the high school. The sooner it comes, the better for the school. In one school a principal may have large powers of independent action and real control; he may go to another school and find himself hardly more than assistant to the superintendent.

At the start I maintain that it is impossible to direct the instruction of the school unless the head of it has a voice in the selection of teachers. The principal, therefore, should take the initiative in filling all vacant instructorships in the high school. Let him find the best available teachers, confer at length with the superintendent about their suitability for the school, and then request their nomination to the school board. When the principal has a real hand in appointing his teachers, he will be concerned in their success and will feel a responsibility in contributing to this success.

After the teacher is appointed the principal cannot withdraw to his sanctum and throw upon the teacher all the burden of suc-

[1] A paper read at the Second Annual Conference of Massachusetts School Administrators, Cambridge, June 30, 1916.

cess. If he does it, he usually says he does it to make the teacher depend upon her own resources; she should sink or swim. More probably he does it because of his own indolence or of his ignorance of the help the teacher needs. The principal is to be something more than a disciplinarian, something more than the principal teacher (for "principal" is an adjective); he is to be the director of the school, setting its moral, social, and intellectual tone and character, determining therefore the instruction of the school.

To get results in the selection and development of the teacher the principal must himself be intellectually alert and ambitious. Too commonly the principal limits himself to administrative duties, to practical service to students, and, in his study, to general reading. As much as any of his teachers he needs to keep himself intellectually alive and for this he should find the time for the detailed pursuit of a special study. He needs to feel himself in the spirit of modern specialized scholarship, and nothing helps more to this end than an hour, more or less, reserved every day for one's own definite and advanced study. Getting this time and using it requires more will power, quicker thought and action, more social and other sacrifices than many of us are prepared for. I do not maintain that a principal has the opportunity to make himself a research specialist, but I do assert that he needs the sense of mental getting-ahead that this progressive study gives him. The spirit and results of such advanced study will crop out in his own class teaching, in his talks in school assembly, perhaps in his contributions to educational periodicals, and will have an abiding influence upon the intellectual tone of the school. His teachers will have a respect for his industry and scholarship and take a greater pride in their own work. As an army takes a pride in the capacity of its general, so does a teaching corps in the intellectual caliber of a principal.

The principal should have the best possible acquaintance with his job before he comes to it. Most men now are principals by inspiration or "by the grace of God." A successful and popular teacher is assumed to promise well as a principal and is forthwith appointed to the task. Few principals have studied in advance the problems and methods of secondary education or the state laws pertaining to high schools; few have investigated or thought out

the relation of the principal to the student, to the superintendent, to the teachers, to the public. Few before coming into their office have had practical tests that would demonstrate a faculty for, and satisfaction in administrative work. At present the chief financial rewards of educational work are for administrative officers. This fact lies on the surface, and yet many give no heed to it and make no specific preparation for a profession to which in later years they are likely to aspire.

Our colleges and normal schools ought to provide solid courses in administration for men and women who deliberately intend to enter executive work. Such preparation would include the study of the psychology of youth and of high-school subjects, the principles of general method, and a good knowledge of special methods in high-school subjects. The psychology should give them a practical working knowledge of the mind and heart of youth and ways of adjusting the curriculum to their needs, for few of us have a clear recollection of the thoughts and feelings of our adolescence and these need to be made patent to the high-school executive. Their knowledge of good methods will come into play with those teachers who have acquired subject-matter only and need constant direction as to method. The principal should know familiarly the best books and periodical literature of secondary education and keep abreast of the new literature as it appears. Subscribing for, or having ready access to one first-rate periodical, such as the *School Review*, will provide in itself much material of value and keys to more. If I could have my way, more of our principals would come to their positions through apprenticeships as assistant principals of approved efficiency in their own or other schools; but whether they come with or without this apprenticeship, they must in future have a larger preparation for their work than they are now getting. The next school generation will see rapid augmentation of the demands upon the principal, and the schools will in less and less degree permit the man to acquire all his preparation after he has taken the position.

Assuming now that the principal has the requisite preparation for his task, he will secure the most effective co-operation of his teachers if he establishes and cultivates a spirit of comradeship. It

is not necessary for the competent principal to stand hard upon his dignity. The teachers ought to feel the earnestness of his interest in the success of their work. He will be a frequent visitor in their classes, staying long enough at every visit of real inspection to see what is being done and to catch the spirit of it. Frequency of visitation will make teacher and pupils less conscious of the visit and will give a fairer impression of the work. A private conference with the teacher afterward opens the way to commendation, criticism, and common understanding. Methods of work may be improved and suggestions made for more effective consideration of the needs of individual students. This is the time when the principal's intellectual leadership in the school counts for most; it is then that everything he knows about methods, about subject-matter, and about boys and girls is drawn upon. The unprepared principal is utterly unable to give a struggling teacher the professional guidance she needs. In every conference the teacher should be encouraged to express her opinion, and the principal should be able to state clearly and pithily his own point of view and to secure the assent of the teacher to it. The teacher will come to clearer views by stating such ideas as she has; often their very haziness is not apparent until she tries to express them. More than likely, the Latin teacher, for example, will express the motive for the study of Latin in terms of the old formal discipline, but this reply is now neither psychologically nor practically satisfactory. Sometimes the principal will need to supplement his friendly consideration for the teacher by a firm insistence upon the use of good materials and methods; persuasion does not avail with every teacher.

Teachers' meetings offer a ready means of constructive discussion. Too often they are largely disciplinary or are conferences on the work of individual students. But here is an occasion when the permanent policies of the school may be worked out; when teachers will report on visits to other schools; when the needs of the school itself are considered at length by the faculty as a Committee of the Whole on the Good of the School; when recent interesting and important literature may briefly be reviewed. Such a meeting makes for *esprit de corps*, for individual and mutual respect, and professional ambition.

In the budget of the school the principal has another chance to improve instruction by enlarging equipment—securing more and better apparatus for science classes, more books for a good working school library. And in this library or in the office provision should be made for two or three of the best educational journals, and the teachers should be encouraged to use them. From time to time sample copies of department periodicals like the *History Teacher's Magazine*, *Elementary Science and Mathematics*, and the *English Journal* might in an especial way be brought to the attention of teachers; they may be induced to subscribe to them—with consequent improvement in their teaching. Many of our schools have so limited funds for equipment that economy requires principal and teacher to confer at length about the conduct of work and about necessary supplies and equipment, and here is another open door for the principal's influence on the teaching in a department.

Having determined the avenues and means for applying his influence to the instruction of the school, the principal should advance every year the intellectual capacity of his faculty. There is hardly a school that does not have every year one or more changes in the teaching force. Every new appointment gives the opportunity to secure a teacher better than the one who left or better than the general average of the whole faculty. In this canvass for the new teacher the principal will be interested, not only in the present attainments of the candidate, but also in her professional ambition and her capacity for growth. There is a vast difference in teachers in this respect—even in the colleges, where some Ph.D. men never produce a thing beyond their thesis for their degree.

The school is not alone in its influence upon the teacher. The community reacts upon it. An intelligent, mentally vigorous community demands good teachers, appreciates them, stimulates them. Sometimes one of the best services a principal can render his teaching force is outside the school, in the educational stimulus he gives the community. He may be a veritable missionary of culture in the community, and if he is, great grace comes to him and to his school.

The principal will sometimes find a teacher restless because he seems to himself to be getting nowhere, is marking time or is already decadent. A discerning executive will catch the symptoms before

the teacher "goes bad" and will suggest a period of rest, a year of absence for study, or attendance upon a worthy summer school. Circulars of the best graduate or summer schools may be kept constantly and readily accessible to teachers. A year of special study for an ambitious teacher would often be the professional making of him, and on his return to the school would vitalize his own and the others' work. Some school systems are now offering salary inducements to teachers who attend approved summer schools. If the principal cannot use such study alone as a make-weight in the increase of a given salary, it should certainly be given its proper consideration. The principal will lose no opportunity to discuss with every teacher intending to take summer work the details of her plans and offer suggestions for the election of such work as will increase the teacher's usefulness in the school. Reading circles, lectures, and other local cultural opportunities will have their due presentation to the teachers.

It is apparent from the discussion to this point that the principal's most direct means of improving instruction are in his own training, which enables him to know good teaching and how to secure it; in appointing teachers of good present attainments and promising for the future; in using class visits and conferences with teachers afterward; in employing teachers' meetings for constructive discussion; and in stimulating teachers to higher achievement by summer or regular term study. Less direct means are those, like the cultural opportunities of the community, that energize the teacher's intellectual life and keep her growing.

II

Important indirect influences upon instruction are found in the ordinary routine conditions of the school. Instruction languishes if the teacher lacks the moral support of the principal, the superintendent, and the school board. Especially is this true in discipline. Harassing details of discipline will depress the teacher and degrade the quality of teaching. Since discipline that takes care of itself leaves the energy of the teacher free for instruction, no principal can rightly refuse his fullest assistance to his teachers in the regulation of discipline if he wants good teaching. Mutual confidence

and co-operation of principal and teachers breed contentment, willing service, and comradeship.

If a school is marked by a spirit of old-fogyism, the instruction will inevitably suffer; so also if undue emphasis is laid on the machinery of the school instead of upon the subjects taught, or if on accessories such as athletics and dramatics. The courtesies of the school and the classroom are also a tonic to good instruction. The principal cannot neglect them.

Another feature of administration having important bearings on instruction is the assignment of subjects to a teacher. It is not so much a deference to the desire of the teacher as to the standards of instruction that directs the principal to assign to a teacher so far as possible the subjects most familiar to her. If it can be helped, no completely new field should be assigned to a teacher; if it is not familiar to any one of the force, it would be better to drop it from the year's program, for it is less necessary to offer a given subject in a given year than to provide competent instruction in what is offered. It is a great expense of time—not to say a waste of time—for a teacher to work up an entirely new subject. I was glad one of my former students, now successfully working in a Massachusetts high school, declined recently a $50 increase in salary if she would change to another department for which she had no special preparation.

Grouping of work of a teacher is important. I was lately requested to nominate one of our graduates for a high-school position in English, history, elementary science, physical geography, cooking, sewing, and millinery. Some combinations of work for which we are asked to nominate candidates are freaks. A teacher of peculiar interests resigns and the superintendent tries to find again exactly the same combination—and this may be as scarce as snakes in Ireland. I grant you that the college should require a reasonable breadth of curriculum for its degree, but no graduate can be expected to be at the same time expert in English, the social sciences, the natural sciences, and the domestic arts. It would be better for the standard of instruction in the school to have one or more special teachers on part time than to expect a regular teacher to spread herself over the seven or seventy-seven liberal arts.

Schools often run to an excess of written work. English, mathematics, and language teachers are bent to the earth with bales of papers and the dust of them stupefies them. Better fewer papers and better ones and more time left for inspiring presentation of daily lessons.

The ordinary method of killing off the teacher is the assignment of too many hours of teaching daily and too many subjects. If a school's resources are limited, it may be pardoned for a small curriculum, but no school can escape the responsibility of poor work. No small high school is in duty bound to offer every subject presented in a large high school nor yet every one announced in the college admission schedules. Two sciences would be adequate, sometimes only one; if the two were given, they might be taught in alternate years. If would save the time of the teacher, the competition of courses for the interest of students, and make classes larger. Indeed, an important consideration in good teaching is the size of the class. There is little inspiration in teaching a class of four or five students, but three times as much in a class twice as large. The alternation of the sciences might be copied in the alternation of first- and second-, or second- and third-year English; all English students of two years could be grouped into one class, doing the work of two years in successive years but regardless of the usual order in which the authors are studied. The same procedure might be applied also to history, and if it were applied in history, the sciences, and in English, it would materially reduce the demands of the daily program and permit each teacher reasonable time for the preparation of each subject assigned to her.

A further gain in making classes of larger size would be the preservation of good form in classwork. It is not conducive to good teaching for the class to be composed of three or four students, called by their first names by a teacher who sits on the same settee with them. Regardless of the size of the class, the teacher should keep the business form of a well-conducted class, but this is easier with a class of reasonable number.

The principal, then, is responsible for the instruction of the school. If the responsibility is not definitely placed on him by

others, he ought himself to assume it. It goes with his office; it demands that he know good instruction, how to get it, how to cultivate it from the seed to the flower. The apostle Paul wrote to Timothy, "If a man desire the office of a bishop, he desireth a good work. A bishop must be blameless, the husband of one wife, vigilant, sober, apt to teach. . . . . Not a novice lest being lifted up with pride he fall into the condemnation of the devil. Moreover he must have a good report from them that are without." The same might be said of the principal of the high school, even to being the husband of one wife!

The new high-school principal is a man of sound character, of keen sympathies with youth, of full intelligence of the problems of secondary education, of the curriculum and modern methods of teaching, and of the relations of the school to the community; a man of patience and adamant, of large and broad interests, a man among men. But among all his gifts and his responsibilities none is more fundamental than his capacity as a director of the teaching and the teachers of his school.

EDUCATIONAL NEWS AND EDITORIAL COMMENT

"PEDAGESE"

Words, words, words! Only one whose desk is flooded with manuscripts submitted for publication by teachers of all ranks and conditions can realize how empty many of these discussions are. At institutes, teachers' meetings, and conventions we hear glittering generalities and dull platitudes uttered with all the force and solemnity of a Mr. Pecksniff. In classrooms lecturers in education spin out so thin the theories of teaching that students are lost in the dreamy maze. And editorial writers in educational journals sin with as great regularity as any of their colleagues mentioned above.

Through this habit of running to words, words, when talking and writing of their work, teachers have quite generally discredited the science of education. They have created a suspicion that where vapidness is so prevalent lack of valuable content and substance must be the cause. Indeed, a term has been invented which quite admirably sums up the criticism of shallowness made against theorists in education, "Pedagese."

One example is in point. We recently picked up a prominent educational journal whose leading article was entitled "What High School Studies Are of Most Worth?" Here, we thought, must be practical suggestions for curriculum makers, or for parents who are trying to guide their children aright. But Pedagese! A glance through the nine columns showed many stock phrases such as "Spencer's revolutionary book on education," "the quantitative theory of education," etc. In the final paragraph the illuminating conclusion reached was that "those high-school studies are of most worth which are worth most." This conclusion shames Pecksniff's bland and affable declaration, "Two times two are four, my good soul!" To be fair it must be said that the conclusion adds a few other phrases, which, however, fail to modify the astounding finale reached in "most worth is worth most." The added phrases are: "Most worth to the individual pupil," and (studies) "which best fit him for meeting the many-sided demands of the life which he is to live." Nine columns to repeat Spencer's theory! This is a fair sample of "Pedagese."

"Pedagese" is a shortcoming whose causes are not inherent in the science of education. In any new science pioneers are likely to begin with finely spun theories rather than minute examination of data. That this fault is gradually being eliminated is evidenced by the large mass of statistical material which surveys and investigations are compiling. Education is learning that to dignify itself as a science it must more and more "hug the facts," and what is equally important, yes, what is a prior necessity, education must have the facts to hug. The *School Review* dares to speak for itself and for all of its colleagues who are at times guilty of "Pedagese." We hope that we teachers can stop talking and writing theories and personal opinions. We hope that we shall talk and write of our own actual experiences and experiments and investigations. Herbert Spencer and his ilk have their place—but what will help educational science today is not rehashed theory. We need vital, concrete data, facts, upon any and all phases of school activities.

A Valuable Bulletin

Every principal of a rural high school should secure United States Department of Agriculture Bulletin No. 385, *School Credit for Home Practice in Agriculture*, by F. E. Heald. The correlation of home and school tastes, means and methods of co-operation, exact plans for grading, are explained.

A child's report shows, for example:

	Rank	Credit	Total
Arithmetic	80	5	400
Language	85	4	340
History	90	5	450
Geography	87	3	261
Home projects	90	3	270
		20	1,721
General average			85

Success of Graduates in College

President Smith, of Phillip Exeter Academy, in his final words to his graduating class, said; "I know you have learned here that the significant thing is not always the prominent thing, and that the significant person is quite likely to be the person who has no prominence at all." The

truth uttered in these words is unfortunately thrown in the shade in the very bulletin which contains President Smith's statement. Under the heading, "Exeter Men in College," many paragraphs are like the following sample:

> To begin a long enumeration of Harvard men who were known on the Plimpton Playing Fields and on the Fresh River before distinguishing themselves on Soldiers Field and on the Charles: J. A. Gilman, '17, was elected captain of the football team, and would have been the second captain from Exeter in three years if he had not left college. T. H. Enwright, '18, was captain of the '18 team, and played on the 'varsity for part of last fall. N. E. Burbidge, '17, managed the 'varsity last fall, and T. B. Aldrich, '18, was manager of the '19 team. E. L. Casey, '19, was one of the most promising men on the '19 team, and is a very probable man for the next 'varsity. A. B. Cranston, '19, was a member of the '19 football squad throughout the fall.

Exeter men attained also a surprising number of honors for scholarship. The point is that "prominence," especially prominence in athletic prowess, is played up as the mark of success. Only a quiet word, here and there, like President Smith's, tells our children that there is a vast difference between mere success, on the one hand, and the earnest, unostentatious desire to do one's best, on the other. Hard, indeed, it is to teach youth that the glare and the limelight are less certain tests of success than the unheralded and unknown quiet hours with a good book in one's room.

Collective Marking

In almost every line of school activity pupils are impressed with the necessity of team play, of co-operation. This is just as true in keeping the building clean as in playing on the football team. In one vital matter only do the schools emphasize individualism to the extreme. Classroom exercises, recitations, written papers, examinations, are in a sense competitive. Individual marks, especially in systems which publish the comparative ranks of pupils, in the order of honor points attained, make pupils interested solely in their own individual success. The influence of this strictly competitive system may be unethical and anti-social both for high-stand and low-stand pupils.

The *School World* for August, 1916, an English journal, contains an experiment by Shillum Harke, a teacher who has adopted a collective system of marking, whereby—

> First, it should be possible to signify by marks the collective achievement of the whole form as well as the separate work of the individuals composing it;

secondly, a standard should be fixed the attainment of which by their collective efforts would represent a high level of general industry; and, thirdly, an inducement to reach this standard should be presented in the promise of some form of collective reward.

Under our new plan the "full" mark for each lesson is recorded by the master, and these "full" marks are added together at the end of the week. By means of a slide-rule each boy's total mark can then easily be represented as a percentage of this sum of the "full" marks. Equally easily can be produced his average percentage for the three subjects combined. For example, the marks of the same four boys for the same week appear as follows:

	English 100	Latin 100	French 100	Combined 100
Smith.....	73	71	69	71
Jones.....	51.5	74	72	65.8
Brown.....	47	76	64	62.3
Robinson.....	53	52	46	50.3

By a slightly more lengthy operation we can then find the average percentage of the whole form for the combined subjects. In this particular week the average for the form of 64 boys was 61. This is where we apply our test. A numerical standard was fixed at first by way of experiment at 63 per cent, afterwards with general consent at 65 per cent. Every time the average, which obviously depends upon collective effort, reaches 65 per cent the collective reward is granted. There is, of course, no particular virtue in the number 65. It is quite clear to me that each master can only by trial determine what number suits his own methods. When, as in this case, the different subjects are divided between two masters, comparison of their respective methods will be necessary.

The reward consists in the remission to the whole form of one half-hour of work or half-lesson for every time that the 65 per cent is attained. These periods can be "saved up" and spent continuously. There was certainly eagerness to obtain the reward, but there was no trace of the spirit of "get all you can, never mind how." When it became clear that in fixing our standard at 63 per cent we had fixed it too low, it was decided unanimously to raise it to 65 per cent. On another occasion the form rejected a suggestion of mine that in view of special circumstances an average which had just failed to reach the required number should be counted as having done so. In fact, it was evident that the idea of collective work had produced an enlarged sense of responsibility for its adequate performance. This sense of responsibility, I believe, can only grow when the boys are given every possibility of marking their own work, when they are encouraged to discuss and criticize the work of one another, and when precautions against fraud and dishonesty are reduced to a minimum.

Money Well Appropriated

The Committee on School Management recommends concurrence in the following report from the superintendent:

The Superintendent of Schools reports that in his belief it will be conducive to the strengthening of a school spirit among the pupils if encouragement be given to the organization of bands of music among the members of the student body. At least two high schools have started funds for the purpose of securing instruments.

The superintendent recommends that as a means for the encouragement of this movement, Mr. N. P. Peterson be employed as special instructor in band and orchestral music beginning September 1, 1916, at a salary of $2,000 a year, and that a special certificate be awarded as instructor in instrumental music. Provision for the same has already been made by the Committee on Finance.[1]

The New School Laws in Maryland

The legislature of Maryland has shown its wisdom in passing, almost without amendment, the new legislation recommended by the commission which recently conducted the state survey. The more important provisions of the new law are as follows:

a) School-board members are now appointed by the governor without restriction. This displaces the provision of the old law which required that at least a majority of the school-board members, both state and county, had to be from the political party in the majority, and that the governor's appointments be "by and with the consent of the senate."

b) The new law gives educational officers broad professional powers. The state superintendent is given wide authority over appointments of county school officers, school buildings, etc.; while the county superintendents are made responsible for appointment of teachers, selection of textbooks, purchase of school supplies, etc.

c) The new law prescribes minimum professional qualifications for all teachers, especially those in administrative positions. State certification of teachers supplants the authorization to teach formerly given by thirty separate boards.

d) The new law provides that each county, in order to receive its apportionment of the state school tax, must first make a local levy, equivalent to thirty-four cents on the hundred dollars, for the support of schools; it must employ a county superintendent, a supervisor, and a

[1] From a report by the Chicago Board of Education, July 24, 1916.

truant officer, all of whom are to be paid a minimum salary, the state paying half up to a certain sum.

This law went into effect June 1, 1916, a number of its provisions coming into operation gradually. Most of the features follow the wisest school legislation of the present day. Such features are concentration of administrative authority in school experts, disassociation of the school system so far as possible from politics, insistance upon thorough preparation and uniform certification of teachers and officers, compulsion brought to bear by state upon local communities if they desire to participate in state benefits. The one feature which seems least adequate is that providing for state-wide compulsory attendance. The limit of twelve years is at least two and probably three years too low; it indicates that Maryland is still to be classed as a southern state in this regard. There is a provision that children thirteen years of age and older must attend for not less than one hundred days in each school year. If this provision is enforced, it may compensate for the low limit of twelve years.

Experiments in Supervised Study

A committee of the Manual Arts High School of Los Angeles, which has charge of supervised study, has issued an elaborate brief which ought to be in the hands of every superintendent who is contemplating the introduction of this device. As an illustration of the valuable data included in the brief, we print the following list of schools whose experiments are worthy of investigation.

A. Abolition of all class recitation, substitution of supervised individual study: Pueblo plan: Oakland, Holyoke, Mass.; San Diego; McKinley High School, St. Louis.

B. Division of classes into slow, medium, and fast sections, each advancing at its own rate: University High School, Chicago; Lewis Institute, Chicago; Cicero Township High School, Cicero, Ill.; Elkhart, Ind.

C. Requiring only students who need the recitation to give attention to it, and providing special supplementary assignments for the fast pupils: Columbia, Missouri; University High School, Chicago.

D. Organization of prescribed supervised study to supplement class instruction:

1. Experiments not affecting clock schedule:

a) The study-hall plan: tried in Fullerton, Cal. Study-hall study supervised by teacher who directs study.

b) The study coach: Newark, Ohio; Hillsdale and Jackson, Mich. Delinquent and indifferent pupils are referred to this coach for special instruction.

c) Review groups: University High School, Chicago; Detroit, Mich. Delinquents in algebra and Latin are formed into special groups for review work together with the regular advanced work.

d) Two-hour periods in algebra, geometry, foreign languages, and science: University High School; University of Missouri; Joliet, Ill.; and enthusiastically recommended by Santa Ana, where it was tried in 1914–15.

e) Supervised home-study plan. Pupils are expected to have a study-schedule card for home or school study (W. C. Reavis).

f) One study period a week in each subject: DeKalb, Ill.

g) No home study, but study periods for each subject in the regular school program: Alameda, Cal.

h) The conference plan: Long Beach. Study hours in department, for pupils needing assistance, supervised by department teachers.

i) The New York plan: One-fourth of the pupil's lesson must be supervised.

j) The Batavia plan: Batavia, New York. Organization of prescribed supervised study to supplement class instruction:

1) Two-teacher plan.

2) One-teacher plan (in various forms).

2. Experiments in the longer period—sixty minutes of recitation and supervised study (one form of the Batavia plan):

a) Being tried in Newark, N.J.; Wisconsin University High School; Trenton, N.J.; Morristown, Pa.; Ogden; Duluth; Auburn; Syracuse; Kansas City, Mo.; Detroit; Seattle; Clinton, Ia.; Pueblo; Santa Ana; Pasadena; University High School, Chicago.

High-School Salaries

Superintendent M. G. Clark, of Sioux City, Iowa, has gathered data from fifty cities of the Middle West, endeavoring to establish general averages of salaries paid to high-school teachers. The data of greatest interest bear upon schedules of increase in salaries. The maximum salary a high-school teacher may expect ultimately to reach, after approximately ten years of service, seems to be about one-third larger than his beginning salary. That is, if he begins with $1,000.00, after ten years in the same school he may expect $1,500.00, attained by annual advancements of $50.00 to $100.00. For men, the average maximum salaries are well below $1,500.00; for women, below $1,200.00.

TABULATION OF QUESTIONNAIRES ON HIGH-SCHOOL SALARIES

FURNISHED BY M. G. CLARK, SUPERINTENDENT OF SIOUX CITY SCHOOLS

(Dated May 8, 1916)

City	I. Pop. in M	High-School Enrolment	II. Principal's Salary and Years	III. Teachers									IV. Heads of Departments								
				Men				Women				Schedule?	Men				Women				Schedule?
				No. Employed	Min. Salary	Max. Salary	Rate of Increase	No. Employed	Min. Salary	Max. Salary	Rate of Increase		No. Employed	Min. Salary	Max. Salary	Rate of Increase	No. Employed	Min. Salary	Max. Salary	Rate of Increase	
CLASS I, BELOW 20,000 POP.																					
1. Appleton, Wis.	18	470	$2,500–7	1	.....	$1,100	Not fixed	11	$ 750	$ 950	Not fixed	No	5	$1,200	$1,350	Not fixed	7	$900	$1,400	Not fixed	No def. increase
2. Beloit, Wis.	18	625	2,100–3	6	$ 800	1,500	$50–100	11	700	1,000	$50	Yes	.....	*	*	.....	.....	*	*	.....	.....
3. Clinton, Ia.	19½	324+1,400, Jr. H.S.	1,900–2	9	900	1,300	50–100	.....	900	1,208	$50–200	Yes	.....	*	*	.....	.....	*	*	.....	.....
4. Eau Claire, Wis.	20	.....	2,000–1	13	850	1,000	$50	17	650	900	$50	Yes	1	1,200	.....	.....	.....	.....	.....	.....	.....
5. West Waterloo, Ia.	15	455	1,900–9	4	850	1,200	50	14	800	950	50	Yes	.....	*	*	.....	.....	*	*	.....	.....
CLASS II, 20,000 TO 40,000 POP.																					
6. East Aurora, Ill.	26	593	2,600–2	7	900	1,400	$100	18	700	1,100	50	Yes	.....	*	*	.....	.....	*	*	.....	.....
7. Battle Creek, Mich.	30	1,055	2,350–6	9	600	1,700	50–200	26	650	1,100	Not fixed	No	.....	*	*	.....	.....	*	*	.....	No fixed rate
8. Belleville, Ill.	22	301	1,600–24	7	900	1,400	?	4	750	1,050	?	No	.....	*	*	.....	.....	*	*	.....	.....
9. Burlington, Ia.	25	669	2,000–4	11	950	1,150	None	15	665	950	None	No	2	1,200	1,200	None	3	1,200	1,250	None	No def. schedule
10. Council Bluffs, Ia.	32	903	2,300–5	9	950	1,400	50–200	21	720	900	$45	Yes	.....	*	*	.....	.....	*	*	.....	.....
11. Danville, Ill.	25	653	2,500–4	7	765	1,300	.....	14	720	1,000	.....	No	None	.....	.....	.....	None	.....	.....	.....	.....
12. Evanston, Ill.	30	885	4,200–10	14	1,400	2,200	.....	27	1,050	1,700	.....	No	.....	*	*	.....	.....	*	*	.....	.....
13. East Waterloo, Ia.	20	500	1,700–3	6	1,250	1,500	$50	16	800	1,050	50	Yes	None	.....	.....	.....	None	.....	.....	.....	.....
14. Elgin, Ill.	28	957	2,700–11	13	1,000	1,500	100	17	800	1,000	50	Yes	5	1,525	1,800	$100	3	1,100	1,300	$50	Yes
15. Fond du Lac, Wis.	28	523	1,700–2	3	No schedule	No schedule	.....	12	No schedule	No schedule	.....	No	4	No schedule	No schedule	.....	4	No schedule	No schedule	.....	No
16. Fort Dodge, Ia.	22	402	2,095	6	1,000	1,053	5 per cent	11	826	1,040	5 per cent	Yes	1	.....	1,653	5 per cent	4	810	1,267	5 per cent	Yes
17. Kenosha, Wis.	29	583	1,900	5	1,000	1,400	$50	17	800	1,100	$50	Yes	.....	*	*	.....	.....	*	*	.....	.....
18. Jackson, Mich.	36	875	2,100–2	9	1,000	1,650	100	20	700	1,100	50	Yes	.....	*	*	.....	.....	*	*	.....	.....
19. La Crosse, Wis.	32	972	2,600–6	10	800	1,375	Not def. av., $75	22	600	1,050	Not def., Av., $50	Yes	5	1,100	1,550	Av., $75	4	850	1,500	Av., $50	Yes
20. Leavenworth, Kan.	23	580	2,100–1	4	675	900	$45	8	720	945	$45	Yes	4	1,080	1,260	$90	5	900	1,080	$90	Yes
21. Madison, Wis.	31	1,193	2,200–2	3	900	1,200	Not fixed	37	875	1,050	Not fixed	No	5	1,400	1,850	Not fixed	2	1,300	1,450	Not fixed	No
22. Moline, Ill.	30	853	2,400–11	7	900	1,400	$50	17	720	1,250	$50	Yes	.....	*	*	.....	.....	*	*	.....	.....
23. Muskegon, Mich.	30	700	2,200–1	21	700	1,800	Max., $100	31	650	1,050	50	Yes	2	?	1,800	Max., $100	1	1,150	1,200	$50	Yes
24. Oshkosh, Wis.	35	900	2,150–14	4	1,050	1,100	Not def.	25	750	1,000	Not def.	No	1	1,250	1,300	Not def.	1	1,000	1,000	Not def.	No
25. Ottumwa, Ia.	23	721	1,800–2	10	1,000	1,300	$50–100	15	665	950	$50	Yes	None	.....	.....	.....	None	.....	.....	.....	.....
26. Rock Island, Ill.	27	788	2,500–5	9	800	1,500	None set	13	800	1,080	.....	No	3	1,000	2,000	None set	6	1,000	1,900	No set rate	No
27. Sheboygan, Wis.	30	495	2,000–7	6	800	1,400	Usually, $50	12	700	950	Usually, $50	Yes	1	Pres.	1,350	.....	.....	*	*	.....	No salary sched
28. West Saginaw, Mich.	20	412 +trade school, 175	1,650–3 2,000	3	700	1,200	$50	12	650	1,000	$25–50	Yes	.....	*	*	.....	.....	*	*	.....	.....
CLASS III, 40,000 TO 80,000 POP.																					
29. Calumet, Mich.	40	1,240	2,600–2	13	No fixed min. $1,150	No fixed max. $1,650	Variable	40	850	1,250	Variable	No	1	.....	2,500	.....	.....	*	*	.....	.....
30. Cedar Rapids, Ia.	41	Voc. H. S. 1,157	2,137–30	4 10	800 750	1,368 1,478	.....	12 31	573 652	1,210 1,184	.....	No No	.....	.....	.....	.....	3	1,184	1,444	.....	No
31. Davenport, Ia.	50	1,139	3,300–9	20	1,000	1,500	$100	20	850	1,400	$50	Yes	.....	*	*	.....	.....	*	*	.....	.....
32. Decatur, Ill.	45	1,115	2,800–4	12	850	1,250	.....	21	760	1,000	.....	No	5	1,100	1,600	.....	6	900	1,200	.....	No
33. Dubuque, Ia.	43	618	2,300–2	6	800	1,500	.....	16	650	1,000	50	Yes	.....	†	†	.....	.....	†	†	.....	.....
34. East St. Louis, Ill.	75	750	2,300–5	11	1,000	1,800	$75	17	750	1,400	75	Yes	.....	*	*	.....	.....	*	*	.....	.....
35. Lincoln, Neb.	60	1,507	2,500–7	17	840	1,160	50	40	840	1,160	50	Yes	None	.....	.....	.....	None	.....	.....	.....	.....
36. Lansing, Mich.	50	859	2,200–5	11	900	1,500	50	17	600	1,150	25	Yes	.....	.....	.....	.....	1	1,000	1,200	$50	Yes
37. Racine, Wis.	42	842	2,300–4	8	800	1,600	25–50	24	625	1,200	$25–50	Yes	None	.....	.....	.....	None	.....	.....	.....	.....
38. Rockford, Ill.	54	1,542	3,500–8	21	800	1,250	None set	30	750	1,200	None set	No	6	1,000	1,800	None set	4	1,050	1,200	None set	No
39. Superior, Wis.	45	221 947	2,250–6 2,500–3	14	750	1,400	$50–100	26	750	1,400	$50–100, then $100 per year	Yes	None	.....	.....	.....	None	.....	.....	.....	.....
40. Topeka, Kan.	50	1,450	2,400–7	15	675	1,200	.....	34	675	1,200	$45, until $1,000	.....	1	Pres.	1,300	None	1	1,100 at present	.....	.....	None given
41. Springfield, Ill.	60	1,310	3,500–1	13	850	1,400	$50	24	800	1,200	$50	Yes	1	1,500	1,500	.....	1	1,500	1,500	.....	None given
42. Wichita, Kan.	70	1,610	2,650–1	11	900	1,100	Not fixed	33	810	1,100	Not fixed	No	6	1,200	1,500	Not fixed	8	1,200	1,300	Not fixed	No
43. Sioux City, Ia.	02	1,469	3,000–6	16	950	1,400	$100	37	800	1,200	$25–50	Yes	7	.....	$100, extra	.....	2	$100, extra fee	.....	Regular	Yes
CLASS IV, 80,000 TO 120,000 POP.																					
44. Des Moines, Ia.	106	3,115	2,400–1 2,500–15 3,000–10	39	850	1,400	Not less than $50	77	850	1,400	.....	Yes	‡	.....	.....	.....	‡	.....	.....	.....	.....
45. Kansas City, Kan.	92	1,400	2,800–1	24	800	1,360	$45	29	810	1,360	$40	Yes	None	.....	.....	.....	None	.....	.....	.....	.....
46. Oklahoma City, Okla.	84	2,084 700	2,350–1 2,700–25	20	900	1,800	50	45	900	1,350	50	Yes	3	1,350	1,800	$50	2	1,350	1,350	$50	Yes
47. Peoria, Ill.	80	800	2,700–6	21	1,000	1,500	100	36	900	1,200	50	Yes	2	1,700	1,700	100	3	.....	1,300	50	Yes
48. St. Joseph, Mo.	82	1,169	2,500–5 3,200–6	17	675	1,215	.....	32	495	1,125	.....	No	5	1,305	1,485	.....	3	1,125	1,215	.....	No
49. Duluth, Minn.	90	1,765	2,500–9	25	1,000	1,800	50	31	750	1,450	$50	Yes	10	1,000	2,000	50	2	750	1,450	$50	Yes
50. Omaha, Neb.	200	3,000	2,400–4 2,700–1 3,000–1	30	900	1,300	100	110	800	1,200	100	Yes	2	1,400	1,550	.....	7	1,300	1,450	.....	No

* None specified.

† None officially recognized.

‡ Do not recognize heads of departments.

One is surprised that the large cities pay the rank and file of their teachers little, if at all, higher salaries than the smaller cities. Of course this is as it should be. The work of the high-school teacher requires about the same abilities and activities, irrespective of the size of the community. Unfortunately, the teacher in any high school is expected to work to the limit. Nearly one-third of the teachers in the fifty schools studied are men. The proportion of men to women increases slightly with the size of the town.

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BOOK REVIEWS

La Mare au diable. By GEORGE SAND. Edited by MARIE KARCHER BROOKS for the Walter-Ballard French Series. [Direct Method.] New York: Scribner, 1916. Pp. 139. $0.50.

A small octavo volume, attractively bound in green cloth, with frontispiece portrait, and of pleasing craftsmanship, ushers in the new series of Direct Method French texts.

This text, divided into 15 reading sections, each followed by explanatory notes, questions, and exercises, all in French, comprises 100 pages, of which more than 60 are given to the selections. A three-page résumé of subjunctive usage and 35 pages of French-English vocabulary complete the book.

Whereas the reading sections offer in George Sand's simple and idiomatic style an excellent theme for Direct Method grammatical exposition and cannot fail to awaken in the student some literary appreciation, they provide only a glimpse of the charm of the complete edition. Omissions and reductions have been liberally made, resulting in a much abbreviated version, in which the "coutures" are usually carefully concealed. The omission of chap. ix, "Prière du soir," is to be regretted, but the loss of the first chapter and of the "Appendice" does not harm the continuity of the tale. Paraphrase has been resorted to but little.

In notes, given at the bottom of the page, difficult constructions are explained in simple French. The "questionnaires" are thorough and not too long, and ample opportunity for learning deductively the elementary rules of French grammar is to be had in the exercises. In the latter particular emphasis is laid upon the use of the subjunctive and the infinitive tense agreement and a knowledge of and an ability to use common idiomatic expressions. A list of such expressions follows each section.

The vocabulary of about two thousand words seems to have been carefully compiled. Gender is clearly shown by marginal printing of the articles.

In second-year high-school classes, where it is desired to keep the classroom work in French, this volume might be used to excellent advantage, though the editor announces in her preface that she had in mind "the needs of pupils who have had two or three years of French."

OTTO F. BOND

A History of the Family as a Social and Educational Institution. By WILLYSTINE GOODSELL. Crown 8vo, pp. xiv+588. 1915.

This book is one of the Textbook Series edited by Paul Monroe and aims to present in compact form a study of the family in its development from primitive

times to the present day. An excellent chapter on the "Primitive Family" is followed by three others on the "Patriarchal Family Types of the Hebrews, Greeks, and Romans." These chapters are written with great care and comparisons are made easy by the use of an outline substantially alike in the three chapters. The eight chapters following are devoted to the development of the family after the rise of Christianity, and pay special attention to the influence of the church as affecting family relationships and marriage, and to the changes effected by modern industrial conditions and urban life. Beginning with the seventeenth century the study is devoted almost entirely to the family of England and America, ignoring therefore the development in the other parts of Christendom. Very slight reference, for example, is given to domestic conditions in Latin America, or even to those of France and Germany. The last chapter is devoted to a fairly good discussion of "Current Theories of Reform." Selected bibliographies at the close of each chapter and a fine and complete index of thirty-five pages complete the volume.

The work is based on a careful and judicious study of the best texts and source books on the family. Conflicting theories are fairly stated, essential points are clearly made, and useless detail is ignored. Since the author is a woman, naturally the status of woman in its development is emphasized and a feminine interpretation of the "man-made" family is occasionally observable. The study as a whole is characterized by painstaking thoroughness, so that it supplies a demand for a work uniting both the historical and the modern aspects of the family and presenting in one volume the essential information needed for a comprehensive study of this important social institution.

J. Q. Dealey

Plane and Solid Geometry. By Webster Wells and Walter H. Hart. Boston: D. C. Heath & Co., 1915. Pp. viii+467.

The text is a revision of Wells's *Essentials of Geometry*. An introductory chapter of twenty-eight pages aims to make the student familiar with the fundamental concepts of geometry before taking up geometric constructions and demonstrative geometry. The book is so arranged as to make it possible to select the essential theorems, leaving it to the teacher to decide upon omission of the less essential theorems.

The practical value of the subject is emphasized by means of applied problems and artistic designs. There are numerous historical notes to add interest to the work. The proofs of the incommensurable cases are postponed until a treatment of the theory of limits has been given in the later part of the course.

In its main features the textbook is in accord with the traditional texts on geometry.

E. R. Breslich

University of Chicago

Laboratory Exercises in General Science. By HERBERT BROWNELL. New York: Macmillan, 1916. Pp. 215. $0.80.

General Science. By LEWIS ELHUFF. New York: D. C. Heath & Co., 1916. Pp. 433. $1.20.

A First Year in Science. By ADA L. WECKEL and JOSEPH L. THALMAN. Chicago: Row, Peterson & Co., 1916. Pp. 441. $1.25.

At the present time a discussion of courses in general science needs to deal chiefly with the nature of the content, basis of organization, type of unity of the course, and plans for experimentation and observation by the pupils. These points will be chiefly considered in this review. The books contain numerous things which would make it easily possible to construct a review which would deal with style, accuracy or facts, etc., but since the points mentioned in the first sentence are fundamental and are less frequently considered, they are the ones to which attention is here directed.

In the development of courses in general science it is recognized that the experimental side of the work is a matter of great importance. In the first of these three books the author has attempted to present directions for pupil experiment and for teacher demonstrations, with the intent that these outlines shall constitute the basis of the course. It is recommended that the accompanying reading-assignments be selected from numerous texts which are to be made available to the pupils, but no single text be depended upon for the major part of the assignments. In order to make such reading effective there is an appendix of recommended books, and an accompanying list of definite page citations for each of the sixteen general headings under which the laboratory exercises are grouped.

The basis for selection of materials and plans for unifying general science are indicated in the statement that the body of knowledge to be presented in the course is that which "appeals to beginners and finds its unity in their life-experiences and interests." It is frankly recognized by the author that there are many common facts of science which must be omitted from a course in general science, because they may not be of great significance, and because they may not be made a part of the unified scheme; and unity is essential if the course is to have the coherence necessary to true science teaching. The pupil's social and intellectual interests and needs are the guiding principle in selection and organization, rather than the need for the inclusion either of many common trivial details of scientific facts, or for the representation of each of the differentiated sciences.

Based upon the principles above stated, the author's sixteen major topics are of interest as showing the kinds of materials which he regards as essential to the course. They are: "The Human Body," "Heat in Relation to the Human Body," "Health and Well-Being," "Matter and Force," "Water and Its Uses," "The Atmosphere," "Weather and Climate," "At Our Homes," "Household Chemistry," "The Home Surroundings," "Local Industries,"

"The Farm and Our Food Supplies," "Work and Machines," "Magnetism and Electricity," "Phenomena of Light," "The Earth as a Planet," and "The Heavens." Each of these major topics is subdivided into a series of exercises which progress readily and consecutively. Each consists of a series of problems and questions upon the subject in hand. Ninety illustrations, diagrams, and tables are presented to make the experiments, demonstrations, problems, and questions specific. No space is provided for student notes and sketches, an additional notebook being required for that purpose.

In Elhuff's *General Science*, it is stated that the course is organized about "two or three basic ideas which have a broad application and which the mass of simple facts helps to develop into clear concepts. These basic ideas are matter, its properties, and how matter affects other matter—the reaction of matter upon matter; and energy as a property of matter." As is implied by this prefatory statement, this course deals chiefly with physics and chemistry, although there is material which deals with hygiene, plant life, and household applications of science. As an illustration of the attempt to give representation to the different sciences we may cite two chapters. The one given to zoölogy, chap. xl, consisting of 15 pages, on "The Animal Series," deals with protozoa, worms, insects, crayñsh, amphibians, reptiles, birds, and mammals; and the chapter on "Astronomy," chap. xlii, in 7 pages, deals with the earth, sun, moon, planets, stars, and meteors.

The text material is presented in descriptive form, not by discussion of vital problems. The questions at the close of the chapters are in the nature of review questions on the text statements, not problems which require constructive thought. The illustrations in the text are not numbered and are not cited in the text discussions; consequently cannot be so truly an organic part of the presentation of the topics as when citation is made at the point where the illustration is pertinent. Furthermore, some of the illustrations are redrawn from well-known and previously published works but are not credited to those who first prepared these illustrations. No laboratory work is provided, and no statement is given to show what experimental or observational work is expected in connection with the course.

Weckel and Thalman's *A First Year in Science* attempts to provide "a year in physics, chemistry, botany, zoölogy, physiology, and physiography." This text, and the laboratory manual in general science by the same authors, are the outcome of several years of experimentation in teaching first-year science. The purposes they express—to train the pupil "to observe more accurately, to interpret more sanely, to understand the vital importance of everyday affairs, to apply acquired knowledge to useful ends, to become a better citizen of his community," are the purposes held by all progressive teachers of first-year science.

The organization of this text is essentially that of a series of short courses in the special sciences, as is shown by an investigation of the chapter headings and the detailed material within these chapters. Thus chaps. i to vi deal

respectively with "Matter," "Constitution of Matter," "Effect of Heat on Matter," "Transfer of Heat," "Measurement of Temperature," "Changes in State of Matter." Chap. vii deals with "Physical and Chemical Changes," and then chaps. viii to xvi deal similarly with strictly chemical topics, chiefly with the chemistry of the elements; chaps. xvii to xxiv deal with physiography; chaps. xxv to xxx, with botany; chaps. xxxi to xxxv, with zoölogy, and chaps. xxxvi to xl, with human physiology. The materials presented and the form of presentation are quite similar to the materials and presentation of the differentiated sciences as they appear in separate texts on the different subjects. At the close of each chapter there are review questions, not problems, these being designed to elicit restatement of the specific information given previously in the chapters.

There is a wide difference in the points of view shown in the organization of these three courses. In a truly general science course, such as that outlined by Brownell, significant topics in science are selected and studied by use of materials, methods, and thought which may come from any special science as needed. No attention is given to an effort to have each special science "represented," but the topic is studied so as to develop productive thought about it in its relations to the pupil's life and experiences. Coherence and progression in the course is secured by using the inherent vital relations which enable the pupil to pass logically and psychologically from one study to another. Trivial details are avoided on the one hand, and on the other there is avoidance of the appearance of an attempt to present a course in each of the special sciences in a one-year program.

Two serious pitfalls endanger an attempt to teach an introductory course by use of brief courses in each of the special sciences. The first and most serious danger is that pupils are not directed to take up common problems with a scientific method of inquiry, using all the science that can be called upon in the study of these problems, but rather are led to try to apply their classified knowledge of botany, physics, etc., to the problem. The second danger—a danger to the pupil in that he gets a false idea of his attainments and a danger to further work in science—is that the pupils gain the notion that they have had the special sciences, and do not need to take more work in them. Science teaching, to be most helpful in the daily lives and in the later scientific training of high-school pupils, needs to avoid both of these dangers. There can be no doubt on the part of anyone who seriously and calmly studies the situation, that the differentiated sciences have made great gain in their usefulness in secondary education. We should save all this gain, and if we allow brief courses to give the impression that pupils do not need further work in separate sciences there will be great loss; but the immediate difficulty is that special sciences in the first year do not give the kind of training that general science has demonstrated its ability to give.

O. W. C.

BOOK-NOTES

(Detailed discussions of some of the following books will appear later.)

BARBER, FREDERICK DELOS (and others). *First Course in General Science.* New York: Henry Holt & Co., 1916. Pp. 607.

BLEYER, WILLARD GROSVENOR. *Types of New Writing.* Boston: Houghton Mifflin Co., 1916. Pp. 265.

BOEZINGER, BRUNE. *Zweites Aufsatzbuch nach der directen Methode.* New York: Henry Holt & Co., 1916. Pp. 188.

BRESLICH, ERNST R. *Secondary Mathematics for Secondary Schools.* Chicago: The University of Chicago Press, 1916. $1.00.

BREASTED, JAMES HENRY, *Ancient Times.* A History of the Early World. Boston: Ginn & Co., 1916. Pp. 742.

BREWER, JOHN M. *Oral English.* Boston: Ginn & Co., 1916. Pp. 396.

This is a thoroughly well-prepared textbook for high-school classes. The author has seen the problems of public speaking from the standpoint of thinking. Problems of physical elements of oral address are entirely subordinated, as they should be.

BURNETT, T. J. *The Essentials of Teaching.* London and New York: Longmans, Green, & Co., 1916. Pp. 250. $1.20.

CLARK, J. SCOTT. *A Study of English and American Writers.* Vol. III. Chicago: Row, Peterson & Co., 1916. Pp. 645.

COLLMAN, SOPHIE M. *Tales from the Old World and the New.* Cincinnati: Stewart & Kield Co., 1916. Pp. 230. $1.50.

CRAFTS, WILBUR F. *Bible in Schools, Plans of Many Lands.* Washington: Illustrated Bible Selections Commission. Pp. 192. $0.50.

HOLT, LUCIUS HUDSON (ed.). *Selections from the Prose of Macaulay.* Boston: Ginn & Co., 1916. Pp. 454. $1.25.

These selections have been chosen with a view to giving a complete idea of the scope of Macaulay's interests and of the essential points of his literary style. They have been chosen from the whole range of his prose works with the single exception of his speeches. Although his speeches were edited for publication, some of their individual characteristics of phrase and form were obviously intended for oral rather than written expression. It is believed, therefore, that, by restricting those selections to those compositions actually produced for the reading public, the best and most typical examples of Macaulay's literary work have been included.

JONES, GEORGE ELLIS. *Training in Education.* Pittsburgh: Bulletin of the University of Pittsburgh, 1916. Pp. 113.

KELLEY, JAMES P. *Workmanship in Words.* Boston: Little, Brown & Co., 1916. Pp. 333. $1.00.

LEWIS, WILLIAM D., and HOSIC, JAMES FLEMING. *Practical English for High Schools.* New York: American Book Co., 1916. Pp. 415.

MCANDREW, WILLIAM. *The Public and Its School.* Yonkers-on-Hudson: World Book Co., 1916. Pp. 76.

SARGENT, PORTER E. *American Private Schools.* Boston. Pp. 605.
The 1916 edition of the Sargent Series of *Who's Who in American Schools.*

STILES, PERCY GOLDTHWAITE. *Human Physiology.* Philadelphia: W. B. Saunders & Co., 1916. Pp. 405. $1.50.

THOMSON, WILLIAM. *Laws of Speech Rhythm.* Glasgow: James Maclehose & Sons, 1916. Pp. 18. 1*s.*

WOODBURN, JAMES ALBERT, and MORAN, THOMAS FRANCIS. *Introduction to American History.* New York: Longmans, Green, & Co., 1916. Pp. 308. $0.72.